Avaya™ Interchange

Release 5.4/Intuity™ Interchange R5.3 Adding an Aria System That Uses Octel Analog Networking

Issue 1
January 2002

Notice
Every effort was made to ensure that the information in this book was complete and accurate at the time of printing. However, information is subject to change.

Avaya Web Page
The World Wide Web home page for Avaya is http://www.avaya.com

Preventing Toll Fraud
Toll Fraud is the unauthorized use of your telecommunications system by an unauthorized party (for example, a person who is not a corporate employee, agent, subcontractor, or working on your company's behalf). Be aware that there is a risk of toll fraud associated with your system and that, if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

Avaya Fraud Intervention
If you s*uspect that you are being victimized* by toll fraud and you need technical assistance or support, call the Technical Service Center's Toll Fraud Intervention Hotline at 1.800.643.2353.

Providing Telecommunications Security
Telecommunications security of voice, data, and/or video communications is the prevention of any type of intrusion to, that is, either unauthorized or malicious access to or use of, your company's telecommunications equipment by some party.

Your company's "telecommunications equipment" includes both this Avaya product and any other voice/data/video equipment that could be accessed via this Avaya product (that is, "networked equipment").

An "outside party" is anyone who is not a corporate employee, agent, subcontractor, o ra person working on your company's behalf. Whereas, a "malicious party" is anyone, including someone who may be otherwise authorized, who accesses your telecommunications equipment with either malicious or mischievous intent.

Such intrusions may be either to/through synchronous (time-multiplexed and/or circuit-based) or asynchronous (character-, message-, or packet-based) equipment or interfaces for reasons of:

- Utilization (of capabilities special to the accessed equipment)
- Theft (such as, of intellectual property, financial assets, or toll-facility access)
- Eavesdropping (privacy invasions to humans)
- Mischief (troubling, but apparently innocuous, tampering)
- Harm (such as harmful tampering, data loss or alteration, regardless of motive or intent)

Be aware that there could be a risk of unauthorized intrusions associated with your system and/or its networked equipment. Also realize that, if such an intrusion should occur, it could result in a variety of losses to your company, including but not limited to, human/data privacy, intellectual property, material assets, financial resources, labor costs, and/or legal costs).

Your Responsibility for Your Company's Telecommunications Security
The final responsibility for securing both this system and its networked equipment rests with you — an Avaya customer's system administrator, your telecommunications peers, and your managers. Base the fulfillment of your responsibility on acquired knowledge and resources from a variety of sources including but not limited to:

- Installation documents
- System administration documents
- Security documents
- Hardware-/software-based security tools
- Shared information between you and your peers
- Telecommunications security experts

To prevent intrusions to your telecommunications equipment, you and your peers should carefully program and configure your:

- Avaya-provided telecommunications systems and their interfaces
- Avaya-provided software applications, as well as their underlying hardware/software platforms and interfaces
- Any other equipment networked to your Avaya products

Federal Communications Commission Statement
Part 15: Class A Statement. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio-frequency energy and, if not installed and used in accordance with the instructions, could cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Trademarks
All trademarks identified by ® and ™ are registered trademarks or trademarks respectively, of Avaya Inc. All other trademarks are the property of their respective owners.

European Union Declaration of Conformity
The "CE" mark affixed to the equipment means that the equipment conforms to the referenced European Union (EU) Directives listed below:
EMC Directive 89/336/EEC
Low-Voltage Directive 73/23/EEC
For more information on standards compliance, contact your local distributor.

Comments
To comment on this document, send mail to:
Avaya Inc.
Information Development
Room D1-B53
1300 W. 120th Ave
Westminster, CO 80234

Fax to:
Attention Intuity Interchange Writing team. 303-538-9625

Send an e-mail message to:
infodev@avaya.com

Adding an Aria System That Uses Octel Analog Networking

This document describes how to add to your Interchange network a new Aria® system that uses the Octel® Analog Networking protocol.

Keep in mind the following aspects of the instructions:

- Examples are included to aid in understanding, but the actual configurations and data you enter can vary greatly.
- The instructions apply to both Intuity™ Interchange R5.3 and Avaya™ Interchange R5.4.
- In general, it is recommended that the dial plan of the Interchange maintain as much consistency as possible between the addresses to send messages and the phone numbers subscribers dial when simply calling other subscribers. The examples in this document are designed to show such consistency.

Checklist for Adding an Aria Octel Analog Networking Endpoint

To add a new Aria Octel Analog Networking messaging system to an existing Avaya or Intuity Interchange network, do the following:

Task	Details of Task
Task 1: Ensure That Interchange Is Enabled for Octel Analog Networking (see page 3)	Check the Feature Options screen on Interchange. (Professional Services normally does this for you, in addition to other Design Assurance tasks.)

Task 2: Get Information About the System You Are Adding (see page 4)	Complete the Planning Worksheet included in this document. You or the Aria administrator get the system name and phone number, its mailbox IDs, its serial number, and its network setup from a number of Aria screens. The switch administrator for your Interchange system and possibly the switch administrator for the new system will need to give you the dial plan and exact phone numbers (prefixes) for the Aria mailboxes.
Task 3: Determine How to Map the New System's Dial Plan (see page 11)	Complete the Dial Plan Mapping Worksheet in this document (Professional Services normally does this for you).
Task 4: Determine the Type of Subscriber Update for the New System (see page 22)	Understand how full, dynamic, and directory view updates work, and choose the best one for your system.
Task 5: Check the Interchange Serial Number, If Any (see page 24)	Check the General Parameters screen.
Task 6: On Aria, Check Feature Options and Release Number (see page 25)	Check the Display Software Features Installed screen on the Aria system.
Task 7: Verify That the Aria System Is Enabled for Analog Networking (see page 27)	Check the Port Assignments screen on the Aria System.
Task 8: Create an Interchange Profile on the New System (see page 29)	Enter the Interchange as an Aria Octel Analog Networking node in the Aria system.
Task 9: Identify the New System to the Interchange System (see page 39)	Complete the Octel Machine Administration screen.
Task 10: Administer Remote Machine Parameters (see page 41)	Complete the Remote Machine Parameters screen for the new system. Complete the Octel Machine Profile screen also by using the Dial Plan Mapping Worksheet.
Task 11: Map the New System's Dial Plan for Interchange (see page 46)	Complete the Dial Plan Mapping screen for the new system by using the Dial Plan Mapping Worksheet.
Task 12 (Optional): Administer Directory Views (see page 49)	Complete the Directory Views screen.

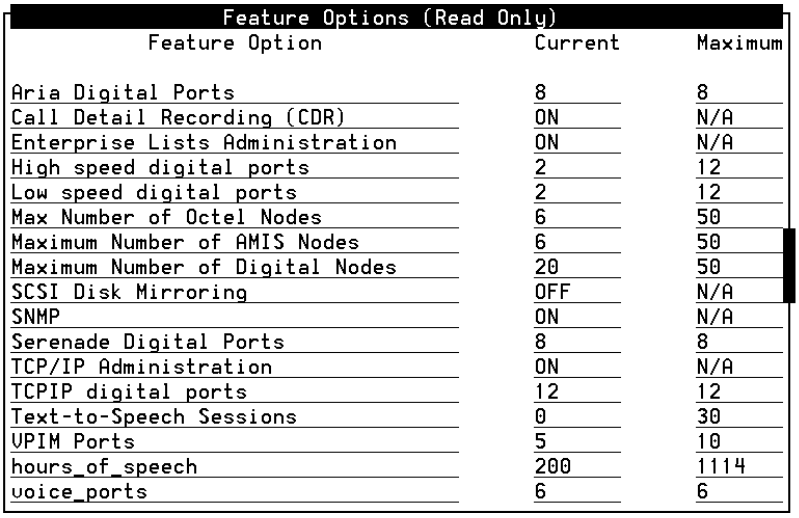
Task 13: Verify That the Endpoint Has Been Administered (see page 52)	Check for a new system entry on the Remote Machine List and the Remote Machine Dial Plan List.
Task 14: Add Remote Subscribers to Interchange (see page 53)	Set up the self-registration phone number on the General Parameters screen and then tell remote subscribers on the new system to send a message. Also, use FTP to upload a subscriber list to Interchange.
Task 15: Verify the Subscriber Update (see page 57)	Run the Subscriber List by Machine Name on Interchange.
Task 16: Test the Connection (see page 57)	Send messages to and from the test mailbox on the new system.
Task 17 (Optional): Manually Update the Aria System (see page 60)	Run a Demand Remote Push to the Aria system (not recommended due to the length of time required).
Task 18: Update Remote Systems for Subscribers on the New System (see page 62)	Add information to Directory Views, if appropriate. Run **get remote_update** from Intuity AUDIX® systems. Run Demand Remote Push from Interchange to Aria, Serenade®, and Octel 100 systems.

Task 1: Ensure That Interchange Is Enabled for Octel Analog Networking

1. Start at the Interchange main menu and select

```
>Customer/Services Administration
    >Feature Options
```

The system displays the Feature Options screen (Figure 1).



Feature Options (Read Only)

Feature Option	Current	Maximum
Aria Digital Ports	8	8
Call Detail Recording (CDR)	ON	N/A
Enterprise Lists Administration	ON	N/A
High speed digital ports	2	12
Low speed digital ports	2	12
Max Number of Octel Nodes	6	50
Maximum Number of AMIS Nodes	6	50
Maximum Number of Digital Nodes	20	50
SCSI Disk Mirroring	OFF	N/A
SNMP	ON	N/A
Serenade Digital Ports	8	8
TCP/IP Administration	ON	N/A
TCPIP digital ports	12	12
Text-to-Speech Sessions	0	30
VPIM Ports	5	10
hours_of_speech	200	1114
voice_ports	6	6

Figure 1. Feature Options Screen

2. Check that the following fields contain the correct data:

Maximum Number of Octel Nodes	The Current column must exceed the number of nodes currently administered on Interchange.
Voice Ports	The number of ports must be sufficient to handle analog messaging traffic between Interchange and the new system.

3. Press F6 (Cancel).

Task 2: Get Information About the System You Are Adding

Your Account Executive determines with you the needed information about the new system and completes a *Planning Worksheet for Aria Analog*. Retrieve these items and enter them in the Planning Worksheet that follows.

To complete the worksheet, you or your Aria administrator will need to get information while performing the following tasks:

1. Determine the Phone Number (Dial String) of the New System (see page 6).

2. Determine the Extension Ranges/Prefixes of the New System Mailboxes and Test Mailboxes (see page 10).
3. Task 6: On Aria, Check Feature Options and Release Number (see page 25).

Additionally, you need to know how many digits are in the Interchange dial plan. Usually the dial plan consists of 7 or 10 digits, though the digits can be from 3 to 10.

Planning Worksheet

System Name: _____ **System Dial String** _____

System Serial Number _____

End Node Test Mailbox(es):** _____

Full Network Address Ranges for this End Node: excluding address ranges associated with those mailboxes which will never receive messages, such as Auto Attendant, Bulletin Board, etc. **Keep ranges as specific to the actual mailboxes as possible** and consider any potential growth. In an existing system, verify existing ranges (see Existing Point to Point Screen Information for mailbox list information. Interchange requires one network address length.

	Area Code and/or Local Exchange Prefix (if any)	Starting Extension	Ending Extension
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

Determine the Phone Number (Dial String) of the New System

To determine the phone number Interchange uses to call the new system, do the following:

1. From the Aria main menu, select the following options

```
> Menu 1 - System Parameters
    > 1 - Change Installation Information
```

The system displays the Installation Information screen (Figure 2).

```
                          Menu 1 - System Parameters            Englewood
                      - Installation Information -

Company Name   :Acme Corporation                                VPMOD ID: 13023
Company Address:Englewood, Colorado                               Area Code:303



Company Phone Number (include area code): 3035550000
VPMOD Phone Number (include area code):3035512345         Extension:
Number of Rings for Local and Long Distance Calls (Used for Outcalls):4
ACP Used for Integration: N
Type of PBX or Centrex VPMOD is on: F - PBX Integration Device/AT&T 85
   Number of Digits in Extension (Used for Outcalling and ECP):4
   Number of Digits in Extension (Used for Message Waiting):4
   Number of Rings for On-PBX Calls (Used for Outcalling):4
   Number of Rings for On-PBX Calls (Used for ECP):4
   Sender ID Used for Telephone Answering Messages:4
Saved Messages - Keep Date/Time Stamp of When the Message was Received:
Block messages to Uninitialized Mailboxes (Y/N): N
ANI Used for Integration: N
```

Figure 2. Installation Information Screen

2. Check the **VPMOD Phone Number** field for the system phone number. The phone number, or incoming dial string, of the new system is normally the “Welcome to ....” number that subscribers use to get messages. However, see Considerations for the New System’s Incoming Dial String (see page 8), for this number might not be the actual number Interchange dials to connect to the new system. After verifying the correct number, enter it in the Planning Worksheet (see page 6).

   In the example, this number is **3035512345**.

3. Press CONTROL+C.

   The system displays the message: `Press any key to return to the System Parameters menu.`

4. Press ENTER until you return to the main menu.

Considerations for the New System's Incoming Dial String

To verify the dial string that Interchange must use to call the new system, consult with your local switch administrator and the switch administrator for the new system.The main consideration is whether the phone number uses:

- The public network
- A private network

Phone Number over Public Network

If you do *not* have a private phone network over which the Interchange calls the new messaging system, the phone number will be a public phone number and include some or all of the following (see also Figure 3):

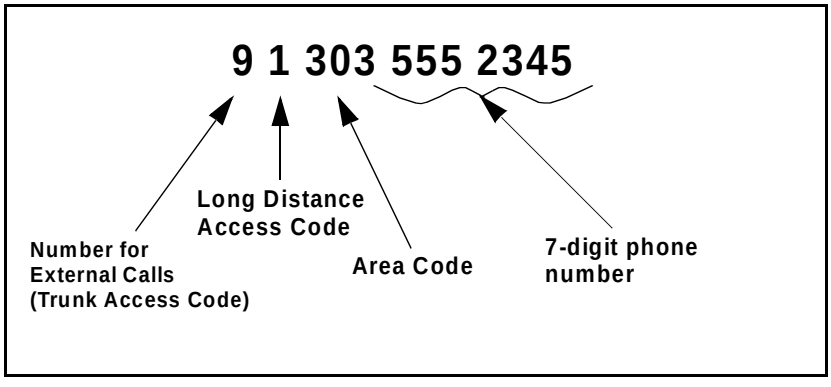


Figure 3. Dial String Example over Public Network

NOTE:
Be sure Interchange is allowed to make long distance calls. This capability is usually determined by Interchange's assigned Class of Restriction on your switch. The area code, which is always required for long distance calls, might also be required if local calls require 10-digit dialing.

Usually, the 7-digit number is the same number that subscribers use to get their messages.

Phone Number over Private Network

If Interchange calls the system over a private network, the phone number includes one of the following (see Figure 4 or Figure 5):

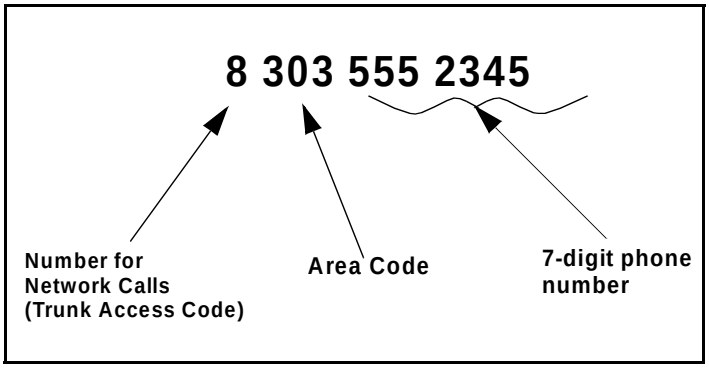


Figure 4. Dial String Example over Private Network (with Dial Access Code)

NOTE:
In this example, Interchange dials the private network access code, **8**, for toll-free calls to another company location. In addition, Interchange dials a 10-digit or a 7-digit phone number, as in the public network example. Again, check with the switch administrator for the new system. Notice, you do *not* dial a **1** for long distance.

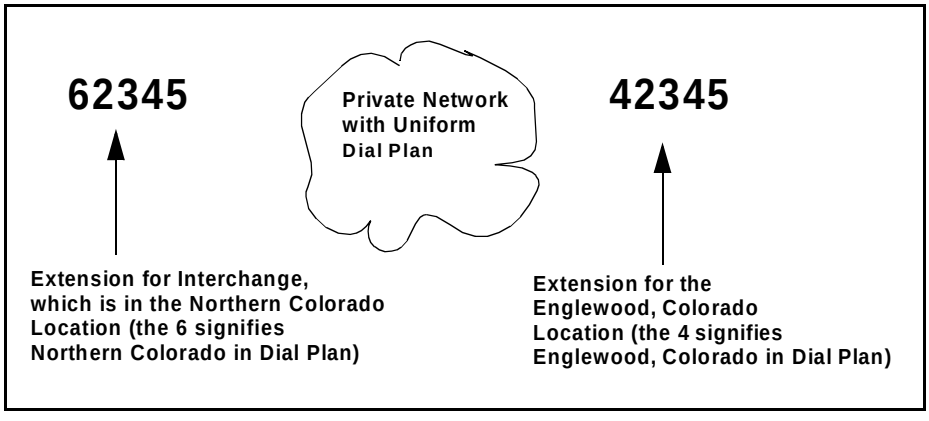


Figure 5. Dial String Example over Private Network (with Uniform Dial Plan)

NOTE:
In a private network with a uniform dial plan, extension numbers are usually 4 or 5 digits. The initial digit often signifies a specific location. In the example, **4** designates the Englewood location in the dial plan.

Dial Plan-Related Screens on DEFINITY Switches

On DEFINITY and IP600 switches, switch administrators use the following screens to determine which number the Interchange needs to and is allowed to dial:

- Dial Plan
- Uniform Dial Plan
- Class of Restriction (COR)
- AAR or ARS Digit Analysis[1]
- AAR or ARS Digit Conversion
- Route Pattern

Determine the Extension Ranges/Prefixes of the New System Mailboxes and Test Mailboxes

1. Determine the **Starting** and **Ending Extensions** of the voice mailboxes on the new system. Consult with the administrator of the new system to determine the appropriate ranges. Enter them in your Planning Worksheet (see page 6).

   The remote messaging system can have 3-digit, 4-digit, 5-digit, or up to 10-digit extensions in various ranges. For example, it can have 5-digit ranges of **20000** to **29999**, followed by **30000** to **39999**, and finally **50000** to **59999**.

   CAUTION:

   *Be sure that ranges do **not** include the extensions of automated attendants and other special mailboxes that are not intended to accept messages. If these mailboxes are included, then messages sent to Enterprise Lists defined by remote machine will fail and will show up in your delivery status reports. More importantly, messages might actually be sent to mailboxes that are not intended to receive E-list messages.*

   You might also exclude bulletin board mailboxes, unless you use them to distribute Enterprise List messages.

2. Determine the **Area Code and/or Local Exchange Prefix(es)** that Interchange must use to send messages to mailboxes on the new system. Enter the prefixes in your Planning Worksheet (see page 6).

   Ask the switch administrator for the new system to get the correct digits. These digits are required because Interchange uses a specified address length (normally 7 or 10 digits for the US) to process all messages.

   The prefix comprises the digits that normally precede the mailbox IDs when someone calls the mailbox from outside of the switch location. The prefix could actually replace digits in the mailbox IDs, as will be defined as a part

1. Automatic Alternate Routing (AAR) is the feature for routing calls over a private network. Alternate Routing Selection (ARS) is the feature for routing calls over a public network.

of Dial Plan Mapping. Usually, prefixes are associated with Direct Inward Dial (DID) trunks that direct calls to the mailboxes. That is, the prefix combined with the mailbox ID is usually the phone number of a subscriber.

For example, mailboxes in the range **20000** to **29999** might normally be preceded by **303-55**. Therefore, if an outside caller wanted to leave a message for mailbox **20001**, that caller would actually dial **303-552-0001**. This example assumes the local area requires 10-digit dialing.

It is possible, however, in a 10-digit dialing area, that mailboxes on the new system could be preceded by *different* prefixes. Therefore, although some mailboxes are preceded by **303-55,** the extension range **50000** to **59999** might be preceded by **720-48**. In this case, an outside caller would dial **720-485-5460** to call mailbox **55460**.

3. Determine the **End Node Test Mailbox** on the new system. You use this mailbox to send and receive test messages through Interchange. Ask the administrator of the new system for a mailbox number. Enter it in your Planning Worksheet (see page 6).

Task 3: Determine How to Map the New System's Dial Plan

NOTE:
Avaya Professional Services normally determines how to map the dial plan for you and sends you a Dial Plan Mapping Worksheet. In this case, you can skip this task.

The Interchange network dial plan can use a uniform address length that consists of from 3 to 10 digits. However, it is strongly recommended that Interchange use a 7-digit or 10-digit dial plan. The new system, on the other hand, will likely have a different dial plan, one that usually uses 4 or 5 digits. In most cases, therefore, you will have to map the dial plan of the new system to the Interchange network address length.

NOTE:
If the mailbox IDs on the new system have exactly the same number of digits as the address length used in the Interchange network dial plan, then you might not need to perform dial plan mapping. For example, if the Interchange dial plan calls for 10-digit addresses, and the mailbox IDs on the new system always use 10 digits, you do not need to map the dial plans. As another example, if the Interchange dial plan uses the 5-digit uniform dial plan of a private network, and the new system's mailbox IDs also use the same 5-digit uniform dial plan within the same private network, you do not need to map the dial plans.

CAUTION:

Since every Interchange address must be unique, there might be circumstances in which the new system's mailbox ID length matches the Interchange dial plan, but because the new system is not part of the same switch private network, the mailbox IDs might not be unique within the Interchange network. This situation is quite common, which is why it is normally recommended to use a 10-digit Interchange dial plan and dial plan mapping.

Use the following instructions and the Dial Plan Mapping Worksheet (see page 20), to determine how to map the new system's dial plan. This worksheet is normally provided to you by Avaya Professional Services.

1. Note these two critical rules:
   - The digit or digits you enter in the Map From column for each Mailbox ID range must be *unique*.
   - If you have only one prefix that you are mapping to and you do not have to replace the initial digit or digits of the mailbox IDs[2], you can set the Map From Length to **0**.

     CAUTION:

     If you change your dial plan later (for example, if you add more extensions that have a different DID prefix) and need to add Mailbox ID ranges for this system, you will have to remove the system from the Interchange network and add it again to the network with the new dial plan. This task could entail a significant amount of work.

     *Therefore, if you anticipate the need to change the dial plan for this endpoint in the future, you might want to use a Map From Length of **1** or more. See Figure 9 on page 16, which illustrates the alternative to Map From Length **0** in anticipation of future changes.*

2. Check your Planning Worksheet (see page 6) for the mailbox ID (extension) ranges of the new system. Review the examples that follow and fill out the Dial Plan Mapping Worksheet (see page 20), according to whether you have:
   - A broken or unbroken range of extensions
   - Ranges of extensions that have different prefixes and the first digit or digits in the **`Start`** field are unique.

2. If the new system's mailbox IDs must conform to a Uniform Dial Plan, the initial digit or digits of the mailbox IDs can overlap, **and differ from**, the ending digit or digits of the local exchange prefix. See Sample Dial Plan Mapping (When Prefixes Replace Initial Mailbox Digits) (see page 18).

- Ranges of extensions that have different prefixes and the first digit or digits in the **Start** field are shared.
- Initial digits in mailbox IDs that must be replaced with different digits.

Sample Dial Plan Mapping (Single Unbroken Range of Mailbox IDs)

In Figure 6, since there is a single unbroken MAILBOX ID range (**2000** to **5999**), you enter **0** in the **Map From Length** field on the Dial Mapping Worksheet. In this case, you leave the **Map From** field for the range blank. Then, the **Map To** digits specify the area code and local exchange 3-digit prefix. You can get these numbers from your Planning Worksheet (see page 6).

When these digits are added to the 4-digit mailbox IDs, Interchange has the necessary 10 digits.

Remote Machine Name: Englewood Mailbox ID Length: 4
Map From Length: **0**

MAILBOX ID:		NETWORK ADDRESS DIAL PLAN MAPPING	
Start	End	Map From	Map To
2000	5999		303555

Figure 6. Sample Dial Plan Map with a Single Range (0 Map From Length)

Keep in mind that Interchange allows you to use a **Map From Length** of up to **9**. In some circumstances with the previous example, you might choose to use a **Map From Length** of **1**, **2**, **3**, or even **4** with the range **2000** to **5999**.

In a likely scenario with range **2000** to **5999,** you might anticipate the need to change the Dial Plan Mapping later, so you choose **1** for the **Map From Length**, *not* **0**. In this case, the map would appear as follows (Figure 7).

Remote Machine Name: Englew

Mailbox ID Length: 4

Map From Length: **1**

MAILBOX ID:		NETWORK ADDRESS DIAL PLAN MAPPING	
Start	End	Map From	Map To
2000	5999	2	3035552
		3	3035553
		4	3035554
		5	3035555

Figure 7. Sample Dial Plan Map with a Single Range (1 Map From Length)

Sample Dial Plan Mapping (Broken Ranges of Mailbox IDs with Map From 0)

In Figure 8, there are broken MAILBOX ID ranges. In this case, ranges 4000 to 4999 and 5500 to 5799 might be omitted for one of two reasons:

- The range contains auto-attendant mailboxes and other extensions for which mailboxes have not been assigned.
- Another messaging system, which uses the same prefix as this system, will use the mailbox ranges 4000 to 4999 and 5500 to 5799.

In this example, you can still enter **0** in the **Map From Length** field on the Dial Mapping Worksheet. In this case, you leave the **Map From** field for the range blank. Then, for the **Map To** digits for the first range, specify the area code and local exchange 3-digit prefix. Then, leave the remaining Map From and Map To fields blank. Interchange will automatically apply the prefix to the remaining ranges.

When the prefix digits are added to the 4-digit mailbox IDs, Interchange has the necessary 10 digits.

CAUTION:

*If it is possible that this system will add mailbox ranges at a later time, do **not** use Map From Length **0**. Instead, use Map From Length **1**, as in Figure 9. If you use Map From Length 0, and then later must change the dial plan so that you must use a different Map From Length, you will have to remove the system from the Interchange network and then add it again.*

Remote Machine Name: Englewood

Mailbox ID Length: 4

Map From Length: **0**

MAILBOX ID:		NETWORK ADDRESS DIAL PLAN MAPPING	
Start	End	Map From	Map To
2000	2999		303555
3000	3999		
5000	5499		
5800	5999		

Figure 8. Sample Dial Plan Map with Multiple Ranges (0 Map From Length)

Sample Dial Plan Mapping (Broken Ranges of Mailbox IDs with Map From 1)

In Figure 9, as in the previous example, there are also broken MAILBOX ID ranges.

However, say that in this example, you anticipate that you will need to change the dial plan for this system in the future, so you avoid entering a **0** Map From Length. If you were to enter **0**, you would have to remove the system and add it again to change its dial plan. So, instead, you can enter **1** in the **`Map From Length`** field on the Dial Mapping Worksheet. In this case, enter the first digit of the first Mailbox ID range in the **`Map From`** field. Then, for the **`Map To`** digits for the first range, specify the area code, local exchange 3-digit prefix, and the first digit of that same Mailbox ID range. Then, enter the first digit of the next range with a unique start digit, and so on.

When the prefix digits are added to the 4-digit mailbox IDs, Interchange has the necessary 10 digits.

NOTE:
Notice that the last Mailbox ID range, **5800** to **5899** does not have **`Map From`** and **`Map To`** digits entered next to it. This is because the **`Map From`** **5** and **`Map To`** **3035555** digits apply to any range that starts with **5**.

Remote Machine Name: Englewood

Mailbox ID Length: 4

Map From Length: **1**

MAILBOX ID:		NETWORK ADDRESS DIAL PLAN MAPPING	
Start	End	Map From	Map To
2000	2999	2	3035552
3000	3999	3	3035553
5000	5499	5	3035555
5800	5999		

Figure 9. Sample Dial Plan Map with Multiple Ranges (1 Map From Length)

Sample Dial Plan Mapping (Ranges That Require Different Prefixes)

In Figure 10, there are broken MAILBOX ID ranges, and one range has a different **`Map To`** prefix. This situation requires a **`Map From Length`** of **1** or greater.

In this example, the range with a different prefix, 5000 to 5999 begins with a unique Start digit. Therefore, you can enter **1** in the **`Map From Length`** field on the Dial Mapping Worksheet. In this case, then, the **`Map To`** digits for the ranges consist of the first digit of each range, and the **`Map From`** digits specify the area codes and local exchange 3-digit prefixes for their respective Mailbox ID ranges.

Remote Machine Name: Englewood

Mailbox ID Length: 4

Map From Length: **1**

MAILBOX ID:		NETWORK ADDRESS DIAL PLAN MAPPING	
Start	End	Map From	Map To
2000	2999	2	3035552
3000	3999	3	3035553
5000	5999	5	7205515

Figure 10. Sample Dial Plan Map with Multiple Prefixes (1 Map From Length)

Sample Dial Plan Mapping (Ranges with Different Prefixes and Shared Start Digits)

In the following example, the new system had two MAILBOX ID ranges with the same initial digit **5** (**5000** to **5499** and **5500** to **5999**), but their DID prefixes were different and, therefore, must be differentiated in the Dial Plan Map. Also, because entries in the **Map From** column for each range must be unique, there must be **2** Map From digits. That is, you ***cannot*** set up dial plan mapping with one Map From digit as follows:

Remote Machine Name: Englewood Mailbox ID Length: 4

Map From Length: **1**

You cannot do this!! See Figure 11 instead.

MAILBOX ID:		NETWORK ADDRESS DIAL PLAN MAPPING	
Start	End	Map From	Map To
2000	2999	2	3035552
3000	3999	3	3035553
5000	5499	**5**	3035555
5500	5999	**5**	7205515

Instead, you must break out every MAILBOX ID range so that the first two digits in each range are unique (see Figure 11). This requirement includes ranges that have unique initial digits (**2000** to **2999** and **3000** to **3999** in the example). The **Map To** digits include 8 digits that specify area code, the local exchange 3-digit prefix, and two additional digits that match the **Map From** digits. When the Map To digits are added to the remaining 2 digits of the mailbox IDs, Interchange has the 10 digits required for the mailboxes.

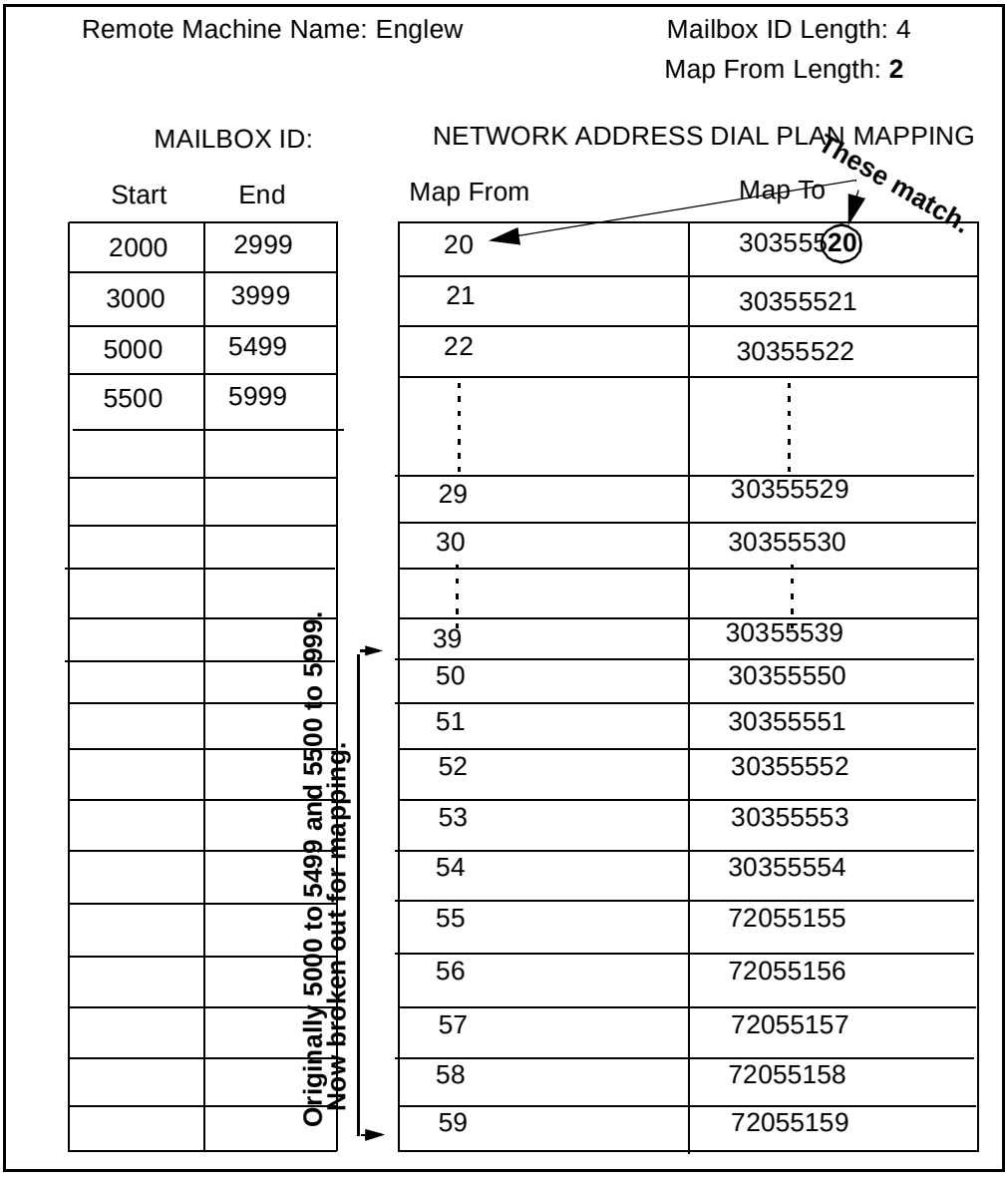


Figure 11. Dial Plan with Multiple Prefixes (2 Map From Length)

Sample Dial Plan Mapping (When Prefixes Replace Initial Mailbox Digits)

In Figure 12, there are broken MAILBOX ID ranges, and the two ranges have different **`Map To`** prefixes. *Additionally*, the mailbox IDs are part of a 5-digit Uniform Dial Plan across two switches so that the initial digits of the mailbox IDs overlap the final digits of the phone number prefixes. In this case, the Dial Plan

Map will replace the initial digit of the MAILBOX ID ranges with a different digit. This situation also requires a **`Map From Length`** of **1** or greater.

In this example, a mailbox in the first range might be **21333**, but its external phone number would be **303-555-1333**. In the Dial Plan Mapping screen, the initial mailbox digit **2** is replaced with the final digit of the prefix, in this case, **5**. A mailbox in the second range might be **54444**, but its external phone number would be **720-551-4444**. In the Dial Plan Mapping screen, the initial mailbox digit **5** is replaced with the final digit of the prefix, in this case, **1**.

Remote Machine Name: Englewood

Mailbox ID Length: **5**

Map From Length: **1**

MAILBOX ID:

Start	End
20000	29999
50000	59999

NETWORK ADDRESS DIAL PLAN MAPPING

Map From	Map To
2	303555
5	720551

Figure 12. Sample Dial Plan Map When Prefixes Replace Initial Mailbox Digits (1 Map From Length)

Dial Plan Mapping Worksheet

Remote Machine Name: _____ Mailbox ID Length: ___
Map From Length: ___

MAILBOX ID:		NETWORK ADDRESS DIAL PLAN MAPPING	
Start	End	Map From	Map To

3. In the **`Mailbox ID Length`** field, enter the number of digits in each mailbox ID. Normally, this number is **4** or **5,** but it can be from 3 to 10. Check your Planning Worksheet (see page 6).

4. In the **Map From Length** field, enter the number of digits that Interchange will replace with mapping digits to convert the current mailbox IDs to Interchange network address length and to ensure unique addresses across the Interchange network.

   The **Map From Length** can be **0** to **9** digits, and how many digits you map can vary greatly depending on how readily the new system's mailbox ranges fit into the existing Interchange network. However, as in the preceding samples, this number will often be based on considerations such as the following:

   - One range (for example, **0000** to **9999** — in this case, you might type **0**) (but see the Caution that follows).
   - Broken ranges, each with unique prefixes (for example, **2000** to **2999** with prefix 303-555 and **4000** to **4999** with prefix 720-551 — in this case, you might type **1**).
   - Multiple ranges that share start digits but have different prefixes (for example, **5000** to **5499** with prefix 303-555 and **5500** to **5999** with prefix 720-551, where **5** is a shared start digit — in this case, you might type **2**).
   - Ranges whose initial digits must be replaced with different digits (for example, a uniform dial plan range of **50000** to **59999**, but a local exchange prefix that ends in **1** — in this case, you might type **1**).

   CAUTION:
   *If you use Map From Length **0**, you **cannot** change this value later. Instead, you must remove the remote system from the Interchange network and add it again.*

5. In the **Mailbox ID Start** and **End** fields, list the mailbox ID ranges of the new system. You get the ranges from your Dial Plan Mapping Worksheet (see page 20).
6. In the first **Map From** field, type the digit(s) that match the first digit(s) of the first **MAILBOX ID Start** and **End** range. This field can be blank if Interchange will add the same Map To digits for all ranges and no digits in the mailbox IDs must be replaced with different digits. However, the number of digits you enter must match the number of digits specified in the **Map From Length** field.

   In the example in Figure 11, the first field contains **20**, because the mailbox ID range starts with 20, and these first two digits will be replaced with the last two digits of the **Map To** digit string.
7. In the first **Map To** field, type the area code and DID prefix of the mailbox IDs. For these numbers, check your Planning Worksheet. The last digits in this field must match the digits in the **Map From** field.

In the example in Figure 11, the first field contains **30355520**, with the last two digits, **20**, as substitutes for the first two digits **20** of the mailbox range, thereby creating mailbox IDs of 10 digits. For example, the first mailbox would have a network address of **303-555-2000**, and the last mailbox in this range would have an address of **303-555-2099**.

NOTE:
If the **`Map From`** field is blank, the **`Map To`** digits will simply be added to the mailbox IDs to total 10 digits.

Task 4: Determine the Type of Subscriber Update for the New System

To keep the remote subscriber list for the new system up to date with subscribers within the Interchange network, you must select one of four options for the new system:

Full updates

NOTE:
Full updates can require a great deal of time to complete since the communication is over an analog connection. As a result, full updates are generally not recommended for systems that use Octel Analog Networking.

Full updates include, in the new system's remote subscriber list, every subscriber on every system in the Interchange network. This option ensures that subscribers on the new system can address by name every subscriber in the network. However, this option can require a very long update time and a large amount of disk space on the new system. Also, remote subscribers who do not send or receive messages will be stored unnecessarily.

If you select this option, Interchange performs a full update when you first administer the new system and run a Demand Remote Push to the new system. Subsequent updates include changes to subscriber lists of remote systems, where subscribers have been added or removed. Subsequent updates occur in either of the following circumstances:

- When you perform a Demand Remote Push to the Aria system
- When Interchange receives a subscriber change from a remote system

CAUTION:
If you begin with full updates and later change to dynamic subscriber updates, Interchange will remove all subscribers from the remote subscriber directory and begin to repopulate the directory with dynamic updates.

Dynamic updates

This update option is strongly recommended. With this option, each time a subscriber on the new system sends a message to a remote subscriber, that remote subscriber is added to the Dynamic Directory List for the new system. Likewise, each time a remote subscriber sends a message to a subscriber on the new system, that remote subscriber is added to the list.

If, typically within the next 90 days (see Dynamic Sub Expiration Days on the Remote Machine Profile screen), no other messages are sent from the new system to that remote subscriber, or vice versa, that remote subscriber is removed from the list. This removal helps save storage space on the new system.

Directory View updates only

NOTE:
Directory View updates can require a great deal of time to complete since the communication is over an analog connection. As a result, Directory View updates are generally not recommended for systems that use Octel Analog Networking.

With this option, the new system's remote subscriber list will include subscribers within ranges of extensions on systems you specify. A Directory View list for a system is static, and as with full updates, this option can use a large amount of disk space. Additionally, with this option, subscribers who fall outside the ranges and systems you specify will not be addressable by name from the new system.

If you select this option, Interchange performs a directory view update when you first administer the new system and run a Demand Remote Push to the new system. Subsequent updates include changes to subscriber lists of remote systems, where subscribers have been added or removed. Subsequent updates occur in either of the following:

- When you perform a Demand Remote Push to this system
- When Interchange receives a subscriber change from a remote system

Combination of Dynamic and Directory View updates

You can use Dynamic Subscriber Updates and Directory Views in combination. In this case, dynamic updates occur as previously described, but the Directory Views option also identifies specific ranges of extensions on specific remote systems to ensure that remote subscribers on those systems can be addressed by name on the new system.

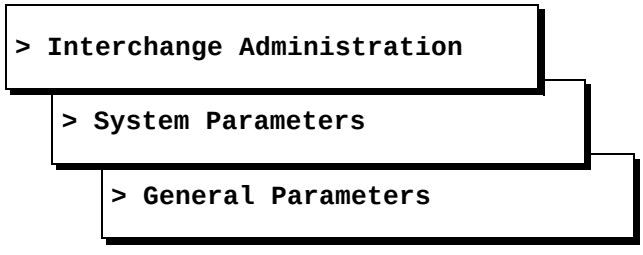
This type of setup is useful when you are converting high-traffic point-to-point systems to the Interchange network and/or when it is important that all or a subset of remote subscribers on a specific system is addressable by name for subscribers on the new system.

None With this option, Interchange will not update the subscriber names list for the new system. This might be a useful option during testing or early during the addition of the new system to discourage subscribers on the system from sending messages through Interchange.

Task 5: Check the Interchange Serial Number, If Any

Since Interchange needs an Octel Analog Networking serial number to communicate with the Aria system, you need to determine the serial number to make sure it matches the serial number you enter for Interchange in the Aria system.

1. Start at the Interchange main menu and select



The system displays the General Parameters screen (Figure 13).

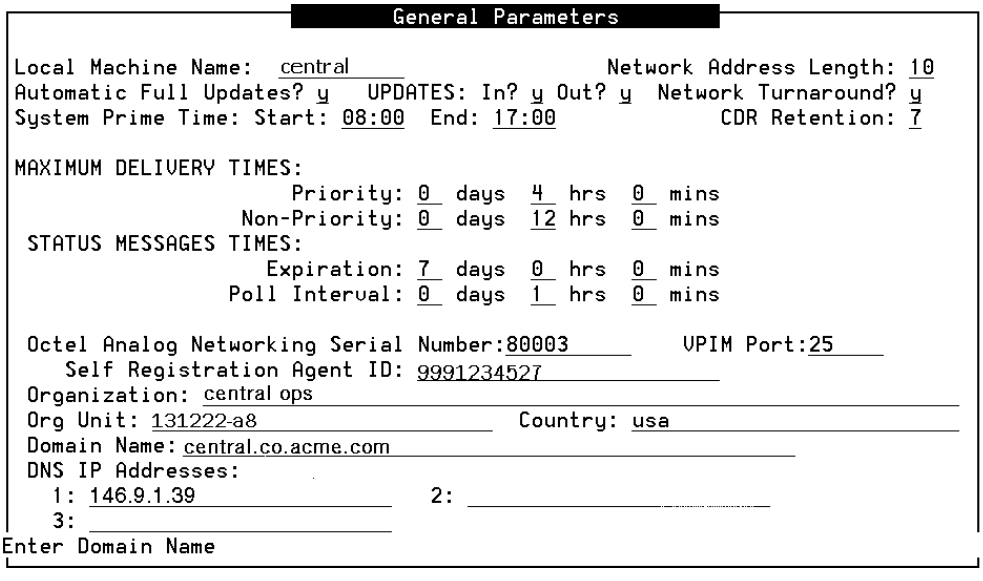


Figure 13. General Parameters Screen

2. In the **Octel Analog Networking Serial Number** field, check the number. If there is no number, type **80000**. This number must match the serial number you enter into Aria when you identify the Interchange to it. Also, this number, which must be between 80000 and 81000, must be unique to any other Interchange systems in the Aria's network.
3. In the **Self Registration Agent ID** field, type a 10-digit phone number to which the new system's subscribers can send an analog message with a recording of the subscriber's voiced name only. This number is actually necessary to complete the self-registration described in Task 14: Add Remote Subscribers to Interchange (see page 53). However, other messaging systems (VPIM, AMIS and Serenade Octel Analog Networking systems) in the Interchange network might also use this number.

   For this number, use a fictitious area code and prefix to ensure the messages do not go to a real phone number or mailbox, either within your Interchange network or in the public network. You might use an alphabetical code so that subscribers can easily remember the number. For example, the number 734 478 3763 spells REGISTER ME on the telephone dial pad.

   In the example, the phone number for self-registration is **9991234527**.
4. Press F3 (Save).
5. Press F6 (Cancel) to return to the System Parameters menu.

Task 6: On Aria, Check Feature Options and Release Number

1. From the main menu, select the following options

```
> Menu 13 - System Maintenance
    > 7 - Display Software Features Installed
```

   The system displays the Software Features Installed screen (Figure 14).

```
25 JUL 01  01:04:35PM  Englewood                                  Englewood
VPMOD Serial # ........ 13023        Software Rel. .... Aria 03.10.09-1
Network Serial # ...... 13023        System Type ........... 250

    8 - Bulletin Mailbox                 Y   9 - CSA
Y  10 - InterMail                        Y  12 - PowerCall Agent Access
Y  15 - Follow-Me-Forward                Y  16 - Call Detail Recording
   17 - Database Retrieval                  22 - Forms Mailbox
   23 - Monitor Mailbox                  Y  32 - General Line Types
Y  33 - Set Emulation                    Y  34 - RS232 Integrations
Y  35 - In-band Integrations                36 - ROLM Limited
   37 - Siemens Limited                     38 - 72 Port Option
Y  40 - Information Processing              42 - Hotel/Motel
   43 - DTMF Forms Mailbox               Y  44 - Networking
Y  45 - Enhanced Call Processing         Y  46 - Ability to Reset Passwords
Y  48 - Information Center Mailboxes     Y  49 - AMIS Analog Networking
Y  51 - Octel Index I                       52 - Octel Index II
   55 - Conference Mailbox               Y  56 - Fax Processing
   57 - Announcement Mailbox                58 - ACP Integrations
   59 - ACP MTA                             60 - Skip Password
   62 - Centralized Network Management      65 - ANI Integrations
Y  66 - Fax Delivery Mailbox                67 - Global Message Redundancy
                                                        -Continued-
```

Figure 14. Software Features Installed screen (Page 1)

2. Check the **Network Serial #** field for the serial number of the Aria system. Write this number in to your Planning Worksheet (see page 6).
3. Check the **Software Rel.** field for the release number of Aria software. If **Aria 2.03** or later does not appear, call to have the Aria system upgraded.
4. Check that the following are marked with **Y.**
   - **44 - Networking**
   - **56 - Fax Processing**
   - **66 - Fax Delivery Mailbox**
5. Press ENTER to display Page 2 of the screen (Figure 15).

```
   68 - Extension Mailbox              Y  73 - Connectivity
   74 - Digital Networking             Y  75 - Octel Admin
   77 - System Backup & Restore




Press any key to return to option selection:
```

Figure 15. Software Features Installed screen (Page 2)

6. Check that **73 - Connectivity** is marked with **Y.**
7. Press ENTER twice to return to the main menu.

Task 7: Verify That the Aria System Is Enabled for Analog Networking

To ensure that the new Aria system already has ports and features enabled for networking, do the following:

1. From the main menu, select the following options

```
> Menu 4 - Port Assignments
```

```
> 1 - Configure Ports
```

The system displays the Port Assignment Options menu (Figure 16).

```
                          Menu - 4 Port Assignments          Englewood

1 - Ports 1A-2L

2 - Ports 3A-4L

3 - Ports 5A-6L

4 - Ports 7A-8L

5 - Ports 9A-10L

6 - Ports 11A-12L

                                        Enter Option:
```

Figure 16. Port Assignment Options Menu

2. Type **1** for the first set of ports and press ENTER.

   The system displays the Port Assignments screen (Figure 17).

```
                             Menu 4 – Port Assignments                    Englewood
    Extension/                             Ln    Pt       Extension/                         Ln    Pt
Pt  PhoneNo.      I O T M N P F Tp D Gp    Pt  Phone No.    I O T M N P F Tp D Gp
--  --------      - - - - - - - -- - --    --  ---------    - - - - - - - -- - --
1A                Y N Y N Y N Y 6    1     2A
1B                Y N Y N Y N Y 6    1     2A
1C                Y N Y N N N Y 6    1     2A
1D                Y N Y N N N Y 6    1     2A
1E                Y N Y N N N Y 6    1     2A
1F                Y N Y N N N Y 6    1     2A
1G                Y N Y N N N Y 6    1     2A
1H                Y N Y N N N Y 6    1     2A
1I                Y N Y N N N Y 6    1     2A
1J                Y N Y N N N Y 6    1     2A
1K                Y N Y N N N Y 6    1     2A
1L                Y N Y N N N Y 6    1     2A
```

Figure 17. Port Assignments Screen

3. Check the **N** (Network) column for ports that have **Y**. You must have at least one port for the system to connect to the Interchange network.

4. Do one of the following:

   — If you find ports enabled for networking, press CONTROL+C and press ENTER to return to the main menu.

   — If you do not find any networking ports, press CONTROL+C, and repeat Step 2 for the next set of ports. Repeat as necessary until you have checked all ports.

5. If you do not find any ports enabled, you or the system administrator must determine how many, and which, ports to enable for networking.

Task 8: Create an Interchange Profile on the New System

To add an Aria system to your Interchange network, you must identify the Interchange system to the Aria networking software. To complete this task, you do the following on the Aria system:

1. Check for Available Node Numbers.
2. Define the Interchange Node Profile on Aria.
3. Define the Interchange Node Profile Weekday Schedule.
4. Define the Interchange Node Profile Weekend Schedule.
5. Define the Interchange Node Profile Address Prefixes.

Check for Available Node Numbers

1. From the main menu, select the following options

```
> Menu 15 - Network Management
    > 1 - OctelNet Administration
        > 5 - List Valid Node Numbers on the Network
```

The system displays the Valid Node Numbers and Message Queues Select screen (Figure 18).

```
              - OctelNet Administration -                          Englewood
         - Valid Node Numbers and Message Queues -

Select Node: 0

Select Message Queue: 0 - Non-Urgent/Standard Subscriber
```

Figure 18. Valid Node Numbers and Message Queues Select Screen

2. In the **Select Node** field, type **0**, and press ENTER.

3. In the **Select Message Queue** field, type **0**, and press ENTER.

   The system displays the Valid Node Numbers and Message Queues List screen (Figure 19).

```
                - OctelNet Administration -                          Englewood
          - Valid Node Numbers and Message Queues -

Node                          A/D  Number of  Total      The oldest message to
 #    Node Name               Pri  Messages   Minutes    be delivered in queue
----  ---------              ---  ---------  ---------  ----------------------
   0  Your VPMOD System
   2  Colo Springs            A:
   4  Santa Fe                A:
   5  Colo Springs            A:




End of List; A/D = Analog/Digital; Pri = Priority; ()* = Future Delivery Time.
Enter 'P' to print the list, or any other key to return to the Network Menu.
```

Figure 19. Valid Node Numbers and Message Queues List Screen

4. Check the list of numbers in the **Node #** column and note the numbers available in the sequence. In the example, the next available node numbers are **6** or higher.
5. Press CONTROL+C to return to Menu 15.1, OctelNet Administration.

Define the Interchange Node Profile on Aria

1. From Menu 15.1, OctelNet Administration, select the following option:

```
> 3 - Define/Change Node Profile
```

2. The system displays the first field of the Node Profile screen (Figure 20).

```
                - OctelNet Administration -                          Englewood
                      - Node Profile -
Node Number: 88
```

Figure 20. Node Profile Selection Screen

3. In the **Node Number** field, type the node number for Interchange and press ENTER. In the example, the Interchange node number is **88**. This is the same node number used by a different Aria system.

   The system redisplays the Node Profile screen (Figure 21), with defaults in many of the fields.

```
                - OctelNet Administration -                          Englewood
                      - Node Profile -
Node Number: 88                                Node Name:        central
Transmission Type: 0 - Normal                      Node Type: 0 - Octel Analog
Number of Digits in a Mailbox: 10                  Serial Number: 80000
NameNet Type: 0 - COS-based                        Site ID:
NameSend:  3 - Send And Receive
Phone Number: 970551111                            Ext:
Dialing Sequence: 9p1n                              Authorization Code:
Access Type: 0 - Direct Dial                       Country: 1 - North American
Max Simultaneous Analog Transmissions: 1          Threshold: 0   msgs, 0   mins

IP Address: 148.1.77.77                            Fallback: 0 - None
Name Transmission Allowed: N                       Play Node Name: N
ASCII Name Check: 1 - Check All Msgs               Node Response Allowed: N

System Manager Name:                               Mailbox Number:
System Manager Phone Number:                       Ext:

Node Profile updated.  Press any key to continue:
```

Figure 21. Node Profile Screen (First Page)

4. In the **Node Name** field, type the name of the Interchange system. In the example, the Interchange name is **central**.
5. In the **Node Type** field, type **0** for Octel Analog Networking.
6. In the **Number of Digits in a Mailbox** field, type the digit length, from **3** to **10**, of the Interchange network dial plan, usually **7** or **10**. In the example, the Interchange network mailboxes have **10** digits.
7. In the **Serial Number** field, type **80000**, unless there are other Interchange systems in the network that already have Aria serial numbers. Check with the administrators of any other Interchanges that communicate with your Interchange. The serial number must be between **80000** and **81000** and must match the serial number entered in the Interchange General Parameters screen in Task 5: Check the Interchange Serial Number, If Any (see page 24). In the example, the serial number is **80003**.
8. In the **NameNet Type** field, type **0** for the COS-based type. This entry requires that subscribers on the Aria system have a specific Class of Service that allows their names to appear in the Interchange subscriber database.
9. In the **NameSend** field, type **0** for None. NameSend is not available for Octel Analog connections.

10. In the **Phone Number** field, type the analog phone number of Interchange. This is the callback number. This number must also be combined with the entry in the **Dialing Sequence** field for the complete dial sequence Aria performs.

    In the example, the phone number is **9705551111**. The Interchange phone number would be found at the AMIS Analog Parameters screen on Interchange, which you access from the Interchange Administration and System Parameters menus.

    As when Interchange dials the new system, the phone number you enter must take into account whether the calls will occur over a private or public network. This, in turn, will determine whether an outside access number (normally 9), a network access number (normally 8), or a private network extension (usually 4 or 5 digits) will be used and whether a long distance digit (1) is included. See Considerations for the New System's Incoming Dial String (see page 8).

11. (Optional) In the **Dialing Sequence** field, type the dialing sequence, which is to be included with the phone number in Step 10. In the example, **9** is the trunk access code, the **p** stands for a 3-second pause, **1** is the public long distance access code, and the **n** stands for the phone number.

12. In the **Access Type** field, type **0** for Direct Dial.

13. In the **Maximum Simultaneous Analog Transmissions** field, type **1**. **1** (one) is normally the number of simultaneous connections you will need. However, if you anticipate heavy remote messaging traffic, you might enter **2** or **3**.

    NOTE:
    This number cannot exceed the number of network ports administered for networking.

14. In the **Threshold** field, type the number of outgoing messages (**msgs**) in queue after which the system uses an additional transmission connection for networked messages to Interchange. Also type the cumulative number of minutes (**mins**) of messages after which an additional transmission connection is used. Both criteria must be met.

    NOTE:
    The threshold applies only if the **Maximum Simultaneous Analog Transmissions** is greater than **1.**

    In the example, the default **3** messages in queue appears, but this threshold does not apply since the maximum simultaneous transmissions is **1**.

15. In the **Name Transmission Allowed** field, type **N**. Interchange also attaches voiced names to messages. Therefore, if this field were **Y**, then message recipients in remote systems on the network would hear voiced names twice for messages sent from this Aria system.

16. In the **Play Node Name** field, type **N**, for the same reasons described in the previous field.
17. In the **ASCII Name Check** field, type **1** to allow Aria to verify ASCII remote subscriber names when receiving messages from Interchange.
18. In the **Node Response Allowed** field, type **N**. This capability is not allowed for Octel Analog Networking.
19. The following fields are for your information only:
    - **System Manager Name:**
    - **Mailbox Number**
    - **System Manager Phone Number**
    - **Ext.**
20. Press ENTER to save your entries and proceed to the next Node Profile screen.

    The system displays the first scheduling screen of the Node Profile (Figure 22).

```
               - OctelNet Administration -                          englewood
                     - Node Profile -

Node Number: 88                              Node Name:        central

Weekday Message Delivery Window 1
   Begin: 12:00a          Interval: 0 - Immediate
   End:   11:59p          Priority: A - Administrative Messages
Weekday Message Delivery Window 2
   Begin: 12:00A          Interval: 0 - Immediate
   End:   11:59P          Priority: 0 - Non-Urgent/Standard Subscriber
Weekday Message Delivery Window 3
   Begin:                 Interval:
   End:                   Priority:
Weekday Message Delivery Window 4
   Begin:                 Interval:
   End:                   Priority:
Weekday Message Delivery Window 5
   Begin:                 Interval:
   End:                   Priority:
Node Profile updated.  Press any key to continue.
```

Figure 22. Node Profile Screen (Weekday Schedule Page)

Define the Interchange Node Profile Weekday Schedule

To define the Weekday Schedule for the Interchange Node, do the following:

1. In the **Begin** and **End** fields for Window 1 (see Figure 22), type the range of time for Aria to send messages to Interchange. In the example, which shows the recommended range of **12:00a** to **11:59p**, delivery can be 24 hours a day.
2. In the **Interval** field for Window 1, type **0** for Immediate. This value means that Aria will pass messages to Interchange as soon as they are recorded and queued up. Other intervals possible are:
   - **1** — 15 minutes
   - **2** — 30 minutes
   - **3** — 45 minutes
   - **4** — 1 hour
   - **5** — 90 minutes
   - **6** — 2 hours
   - **7** — 4 hours
3. In the **Priority** field for Window 1, type **A** for Administrative Messages. Administrative messages are system-level messages such as subscriber updates. Other priority types possible are:
   - **1** — Urgent messages from standard subscribers
   - **2** — Non-urgent messages from priority subscribers
   - **3** — Urgent messages from priority subscribers
4. In the **Begin** and **End** fields for Window 2, type the range of time for Aria to send messages to Interchange.
5. In the **Interval** field for Window 2, type **0** for Immediate.
6. In the **Priority** field for Window 2, type **0** for Non-Urgent/Standard Subscriber Messages. These messages are regular subscriber messages with normal priority.
7. Leave the remaining fields blank and press ENTER.

   The system displays the Weekend Schedule page of the Node Profile screen (Figure 23).

```
                - OctelNet Administration -                          Englewood
                      - Node Profile -

Node Number: 88                            Node Name:        central

Weekend/Holiday Message Delivery Window 1
   Begin: 12:00a          Interval: 0 - Immediate
   End:   11:59p          Priority: A - Administrative Messages
Weekend/Holiday Message Delivery Window 2
   Begin: 12:00A          Interval: 0 - Immediate
   End:   11:59P          Priority: 0 - Non-Urgent/Standard Subscriber
Weekend/Holiday Message Delivery Window 3
   Begin:                 Interval:
   End:                   Priority:
Weekend/Holiday Message Delivery Window 4
   Begin:                 Interval:
   End:                   Priority:
Weekend/Holiday Message Delivery Window 5
   Begin:                 Interval:
   End:                   Priority:
Node Profile updated.  Press any key to continue:
```

Figure 23. Node Profile Screen (Weekend Schedule Page)

Define the Interchange Node Profile Weekend Schedule

To define the Weekend Schedule for the Interchange Node, do the following:

1. In the **Begin** and **End** fields for Window 1 (see Figure 23), type the range of time for Aria to send messages to Interchange. Follow the time with **a** for am and **p** for pm.
2. In the **Interval** field for Window 1, type **0** for Immediate.
3. In the **Priority** field for Window 1, type **A** for Administrative Messages.
4. In the **Begin** and **End** fields for Window 2, type the range of time for Aria to send messages to Interchange.

1. In the **Interval** field for Window 2, type **0** for Immediate.
2. In the **Priority** field for Window 2, type **0** for Non-Urgent/Standard Subscriber Messages.
3. Leave the remaining fields blank, and press ENTER.

   The system displays the Prefix page of the Node Profile screen (Figure 24).

Define the Interchange Node Profile Address Prefixes

```
                - OctelNet Administration -                          Englewood
                     - Node Profile -

Node Number: 88                          Node Name:        central

  PREFIX   D      PREFIX   D      PREFIX   D      PREFIX   D      PREFIX   D
---------- -    ---------- -    ---------- -    ---------- -    ---------- -




Enter Option - A(dd Address) D(elete Address) P(revious) N(ext) E(xit):E
Choose "E" to exit

Network Parameters updated.  Press any key to continue:                    -
```

Figure 24. Node Profile Screen (Blank Prefix Page)

On the Prefix page of the Node Profile screen, you identify the initial digit or digits (prefixes) the local Aria subscribers might enter for remote subscriber addresses in the Interchange network. In addition to the prefixes, you identify the number of digits that follow the prefix to create a complete Interchange network address.

CAUTION:

The combination of prefixes and number of digits you enter for Interchange must be unique to any other systems to which the Aria system is networked. Otherwise, if two remote systems have the same local mailbox IDs and you enter the same prefixes, then when local subscribers address messages, there might be two or more possible destinations for their messages.

In the following example (Figure 25), Interchange has a 7-digit dial plan and three systems in its network, in addition to the Aria you are adding. One system has mailbox IDs that start with 538. Therefore, subscribers are addressed as 538XXXX. In the second system, subscribers are addressed as 607XXXX. And in the third system, subscribers are addressed as 444XXXX.

CAUTION:

This example assumes that there is no remote Aria system, also with 7-digit mailboxes starting with 538, 607, or 444, networked to the local Aria system in a point-to-point configuration.

```
  PREFIX   D      PREFIX   D      PREFIX   D      PREFIX   D      PREFIX   D
---------- -    ---------- -    ---------- -    ---------- -    ---------- -
444          4
538          4
607          4
```

Figure 25. Sample Prefix Page (3-digit Prefixes)

As another example (Figure 26), if Interchange has a 7-digit network dial plan, you might assign a series of 1-digit prefixes that cover any address that starts with 1 through 9. You would then specify that 6 digits follow. In this way, you can avoid identifying the prefixes of every remote system in the Interchange network.

Essentially, a single-digit prefix 5 followed by 6 digits means that Aria would send messages with any address between 5000000 to 5999999 to the Interchange network. Therefore, if you were to have two remote systems, one whose mailboxes are in the range 538XXXX and another whose mailboxes have the prefix 555XXXX, Aria would send messages to both systems because of the PREFIX entry 5. Additionally, for a remote system with mailboxes in the range 444XXXX, Aria would send messages to the system because of the PREFIX entry 4.

This example assumes that there is no remote Aria system, also with 7-digit mailboxes, networked directly to the local Aria system in a point-to-point configuration.

```
  PREFIX   D      PREFIX   D      PREFIX   D      PREFIX   D      PREFIX   D
---------- -    ---------- -    ---------- -    ---------- -    ---------- -
1            6
2            6
3            6
4            6
5            6
6            6
7            6
8            6
9            6
```

Figure 26. Sample Prefix Page (Single-Digit Prefixes)

1. In the **`Enter Option`** field (see Figure 24), type **A** to add an address and press ENTER**.**

   The system redisplays the Prefix page (Figure 27).

```
                - OctelNet Administration -                          Englewood
                      - Node Profile -

Node Number: 88                            Node Name:        central

  PREFIX   D      PREFIX   D      PREFIX   D      PREFIX   D      PREFIX   D
---------- -    ---------- -    ---------- -    ---------- -    ---------- -
1          9
2          9
3          9
4          9
5          9
6          9
7          9
8          9
9          9


Enter prefix to be added:                  Number of additional digits:
```

Figure 27. Node Profile Screen (Completed Prefix Page)

2. In the **Enter prefix to be added** field (for the first field of the **PREFIX** column), type the first prefix of an Interchange network address and press ENTER.

   In the example in Figure 27, the prefix is **1**.

3. In the **Number of additional digits** field (for the first field of the **D** column), type the number of remaining digits that must be added to the prefix to create a complete Interchange network address. Press ENTER.

   In the example, **9** more digits must be added because the Interchange dial plan calls for 10 digits. Thus, Aria will send any message addressed with a **1** followed by 9 more digits to Interchange.

4. Repeat Step 2 and Step 3 for each prefix to which Aria might send messages.

   In the example in Figure 27, all possible initial digits, 1 through 9, are listed, always followed by 9 more digits. This means that Aria will send any message with a10-digit address, 1000000000 to 9999999999, to Interchange.

5. Press ENTER.

6. In the **Enter Option** field, type **E** and press ENTER.

   The system displays the following message: `Network Parameters updated. Press any key to continue:`

7. Press ENTER until you return to the main menu.

8. Repeat Task 7: Verify That the Aria System Is Enabled for Analog Networking (see page 27) to verify that the Interchange node has been defined. In the example, you would see Node 88 now defined for Interchange.

```
                    OctelNet Administration -                    Englewood
                 - Valid Node Numbers and Message Queues -

Node                          A/D  Number of  Total      The oldest message to
 #    Node Name               Pri  Messages   Minutes    be delivered in queue
----  ---------               ---  ---------  ---------  ----------------------
   0  Your VPMOD System
   2  Colo Springs            A:
   4  Lubbock                 A:
   5  Santa Fe                A:
  88  central                 A:


End of List; A/D = Analog/Digital; Pri = Priority; ()* = Future Delivery Time.
Enter 'P' to print the list, or any other key to return to the Network Menu.
```

9. Press ENTER to return to the main menu.

Task 9: Identify the New System to the Interchange System

1. Start at the Avaya Interchange main menu and select

```
> Networking Administration
    > Remote Machine Administration
        > Octel Machine Administration
```

The system displays the Octel Machine Administration screen (Figure 28).

```
                    Octel Machine Administration

Machine Name: Englewood                  Connection Type:OCTEL ANALOG
Dial Str: 913035512345
Machine Type:  ARIA ANALOG               Send FAX Messages ? : Y
```

Figure 28. Aria Analog Machine Administration Screen

2. In the **Machine Name** field, enter a name for the new system. Check with the administrator of the new system for the exact name. In the example, the name is **Englewood**, which is the location of the system.

   The name must be unique within your Interchange network and must match exactly the name entered in to the Aria system.

   Use F2 (Choices) to view the existing Octel Analog system names to make sure that you enter a unique name.

   CAUTION:
   The name must be unique on both the local Interchange and any other Interchange systems, if you have them, in your network. To make sure that you are using a unique name, you can check the Remote Machine List on all Interchange systems in your network. This screen lists all machine names, including AMIS systems and those systems that use Serenade Digital, AUDIX Digital, and VPIM protocols. The path to access this screen is as follows:

   ```
   > Interchange Administration
     > Remote Machine Administration
       > Remote Machine Lists
         > Remote Machine List
   ```

3. In the **Connection Type** field, enter **OCTEL ANALOG**.
4. In the **Dial Str** field, enter the main phone number (the lead or "Welcome to" number) the Interchange system will use to call the new system. Get this number from your Planning Worksheet. This number could be:

   - A 4-digit or 5-digit number in a private phone network
   - An **8** (or another trunk access number) followed by a 7-digit or 10-digit number in a private network
   - A public phone number preceded by a **9**

   In the example, the number **913035512345** indicates that the Interchange must call over the public network (requires **9** for outside access) and that the call is long distance (requires **1**).

You can also enter a "**P"** (including quotes) to make the Interchange pause. One pause equals 1.5 seconds. For example, if you were to enter the dial string as **9"P"13035512345**, the effect would be a 1.5-second pause after the Interchange system dialed **9**.

5. In the **Machine Type** field, type **ARIA ANALOG**.
6. In the **Send Fax Messages** field, type **y** if the system is enabled for fax. If the system is not enabled for fax, type **n**.
7. When you finish entering information for the new system, press F8 (Chg-Keys).
8. Press F2 (Add).

   After you press the key, the system adds the information and returns you to the Machine Name field. You see the following message on your screen:

   ```
   Machine Added, Enter Machine Name, use <CHOICES> for
   list
   ```

Task 10: Administer Remote Machine Parameters

Perform this task to define other characteristics of the new system, most importantly, the dial plan of the mailboxes on the new system. Use the Dial Plan Mapping Worksheet from Avaya Professional Services or your Dial Plan Mapping Worksheet (see page 20) to complete this task.

To set remote machine parameters, do the following:

1. Start at the Interchange main menu and select

   ```
   > Interchange Administration
       > Remote Machine Administration
           > Remote Machine Parameters
   ```

   The system displays the Remote Machine Parameters screen (Figure 29).

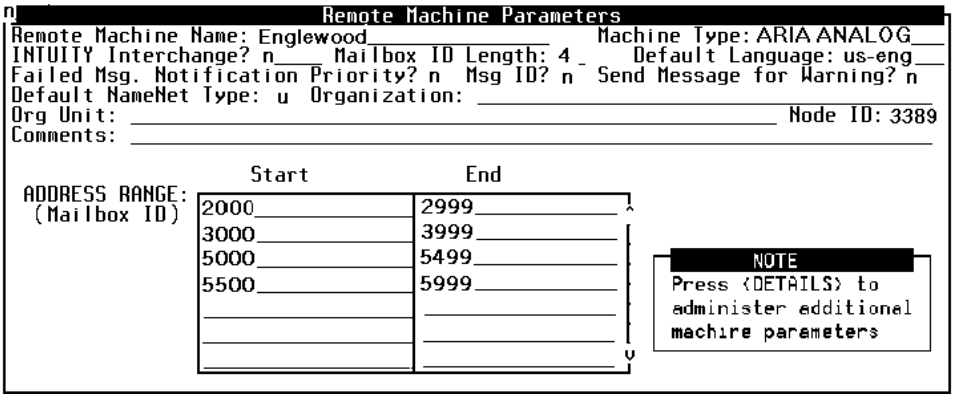


Figure 29. Remote Machine Parameters Screen

2. In the **Remote Machine Name** field, type the name of the new system you added in Task 9: Identify the New System to the Interchange System (see page 39) and press ENTER. If you do not remember the exact name, press F2 (Choices) to display a list of valid remote machines. In the example, you would type **Englewood**.

   The system automatically fills in the **Machine Type** field with **ARIA ANALOG**.

3. In the **Avaya** or **Intuity Interchange?** field, leave the default **n** (no). The new remote system is not an Interchange.

4. In the **Mailbox ID Length** field, type the length of the mailbox IDs of the new system. If a sample mailbox ID (or extension) is **2345**, the length is ***4***.

   In most cases, this number will be **4** or **5**, but the number can be up to 10 digits if, for example, mailboxes have their own incoming trunk group. In the example, the mailbox IDs will be **4** digits long.

5. Leave the defaults in the following fields:

   - **Default Language: us-eng**

     There are no other languages currently supported.

   - **Failed Msg. Notification Priority? n**

     y means that a subscriber on this system who sends a message to a subscriber on another system will receive a priority notification if the message is not delivered to that subscriber.

   - **Msg ID? n**

     y means that failed message notification, if turned on, will include the original message ID.

   - **Send Message for Warning? n** or **y**

y indicates that the **original** message is sent back to a subscriber after he or she has sent a message from the Aria system to a subscriber on a remote system that has the Extended Absence Greeting (EAG) warning activated. The return of this message is in addition to the message indicating the actual EAG warning condition. This capability is convenient for users who resend messages to someone else who is available.

- **Default NameNet Type: U**

  U means ‘‘usage-based’’ and indicates that directory entries are temporarily available based on the network traffic of a particular remote system. This field is used when subscribers associated with this new system are stored on a legacy Octel system as NameNet entries.

- **Organization:** Leave blank.

  This field is for your information. It can be a record of the name of the organization this system supports, the name of the organization that maintains the system, or any other name you choose.

- **Org Unit:** Leave blank.

  This field is for your information. It can be a record of the department number this system supports, the department number that maintains the system, or any other name or number you choose.

- **Node ID:** Display only, created by Interchange.

- **Comments:** Leave **none.**

  This field is for your information. You might want to enter the name and phone number of the contact person for the new system.

6. In the **ADDRESS RANGE (Mailbox ID)** fields, type the address ranges (up to 10) of the new system. While the screen allows you to enter more than 10 ranges, Interchange recognizes only the first 10 ranges you enter. Check your Dial Plan Mapping Worksheet for these ranges.

   CAUTION:
   *Do **not** simply use the ranges from your Planning Worksheet or the ranges given to you by the switch administrator for the new system. Also use the Dial Plan Mapping Worksheet that you received from Professional Services or the worksheet you completed yourself. The ranges you enter here will reappear on the Dial Plan Mapping screen, which you will complete in* *Task 11: Map the New System’s Dial Plan for Interchange (see page 46)**.*

   *In the example (Figure 29), the mailbox ranges reflect the ranges entered on the Planning Worksheet as **2000** to **2999**, **3000** to **3999**, **5000** to **5499**, and **5500** to **5999**. The 5000 to 5999 range was broken out into two ranges to simply illustrate and emphasize the fact that the*

*latter half of the range, **5500** to **5999**, has a different area code and local exchange prefix from that of **5000** to **5499**. You could actually enter the 5000 to 5999 range as a single range on the Remote Parameters screen and then later break down the range on the Dial Plan Mapping screen to deal with the differing prefixes within the range.*

CAUTION:
*Be sure that ranges do **not** include the extensions of automated attendants and other special mailboxes that are not intended to receive messages. If these mailboxes are included, then messages sent to Enterprise Lists defined by remote machine will fail and will show up in your delivery status reports. More importantly, messages might actually be sent to mailboxes that are not intended to receive E-list messages.*

You might also exclude bulletin board mailboxes, unless you use them to distribute Enterprise List messages.

7. Press ENTER or TAB if you need to add more ranges than those that are available on the initial screen.
8. After you have entered all appropriate address ranges, press F5 (Details).

   The system displays the Machine Profile screen (Figure 30). It contains a display-only name for the **Remote Machine Name** field.

```
                    Octel Analog Machine Profile
     Remote Machine Name: Englewood          Default Community ID: 1

 Subscriber Updates Type: dynamic      UPDATES In? y   UPDATES Out? y

Voiced Names for Dynamic? y  ASCII Name Confirmation? y    Admin Mode? n

  Octel Analog Serial Number: 13023     Dynamic Sub Expiration Days: 90

      Record Delay (Sec): 3          Maximum Simultaneous Connections: 1

 Voiced Name Delay (Sec):    System Mailbox ID: 00000
```

Figure 30. Aria Analog Machine Profile Screen

9. In the **Default Community ID** field, leave the default **1**.

   Additional communities might exist on AUDIX systems in the network. If you want to give permissions to subscribers on this system for specific AUDIX community IDs, use the Subscriber Parameter Administration screen.

10. In the **Subscriber Updates Type** field, type the type of update you want for the new system:

dynamic This is the *recommended* ongoing setting because this setting helps save storage space on the Aria system.

For the dynamic updates type, each time a subscriber on this system sends a message to a remote subscriber, that remote subscriber is added to the Dynamic Directory List for the Aria system. Likewise, each time a remote subscriber sends a message to a subscriber on the Aria system, that remote subscriber is added to the list.

If, typically within the next 90 days (see Dynamic Sub Expiration Days), no other messages are sent from the Aria system to that remote subscriber, or vice versa, that remote subscriber is removed from the list.

NOTE:
If you choose dynamic, you can still use the Directory Views screen to create directory views of specific systems and mailbox ranges on those systems.

full Type **full** if you want to perform an initial demand push of all remote subscribers to this new system. A full demand push to the Aria system downloads all registered Interchange subscribers from all networked systems.

By selecting this option, you automatically create, for the new system, a directory view (see definition that follows) for all subscribers on every node in the Interchange network. When you access the Directory View screen (Figure 32), you will see every system in your Interchange network listed.

CAUTION:
Be sure the new system has enough storage space before using this option. Additionally, full updates can require a great deal of time to run since the communication is over an analog connection.

directory view Use this setting to point to the Directory View screen to update the subscriber directory for specific systems and ranges. Since this selection is a static list, the subscriber directory will include only those subscribers included in the Directory view.

none With this option, Interchange will not update the subscriber names list for the new system.

11. In the **UPDATES: In?** field, type **y** to allow Interchange to accept updates from the new system.
12. In the **UPDATES: Out?** field, type **y** to allow Interchange to send updates to the new system.

13. In the **Voiced Names for Dynamic?** field, type **y** to allow Interchange to send recorded voice names to the new system during dynamic updates, if any. Type **n** if the subscriber update type is *not* dynamic.
14. In the **ASCII Name Confirmation?** field, type **y** because Aria's NameSend capability is not available with analog connections. **y** allows Interchange to verify subscriber names on the new system by using connections that the new system has already established when it sends messages and updates to Interchange. This capability helps reduce total time on, and cost of, network communications between systems.
15. In the **Admin Mode?** field, type **n**. This field is normally used for testing.
16. In the **Octel Serial Number** field, type the serial number of the new system. Get this number from your Planning Worksheet (see page 6) or while performing Task 6: On Aria, Check Feature Options and Release Number (see page 25).
17. In the **Dynamic Sub Expiration Days** field, leave the default **90**. However, be sure this number matches the entry in the Aging Out Period (days) field on the Aria system's Menu 15.3.1 - NameNet Directory Parameters. The default on the Aria system is 30 days.

    This number is the number of days that a dynamically added remote subscriber stays in the new system's Dynamic Directory List without anyone sending messages from the new system to that remote subscriber or without that remote subscriber sending messages to the new system.
18. In the **System Mailbox ID** field, leave the default of **0000**. This field is used for the Auto-Copy feature of the Aria system.
19. Press F3 (Save).

Task 11: Map the New System's Dial Plan for Interchange

Interchange uses a single-length dial plan for its network. You will have to map the dial plan of the new system to the Interchange network address length.

To do this mapping, you need the Dial Plan Mapping Worksheet from Professional Services or a worksheet you completed on your own. These worksheets list the area codes and central office prefixes that can be used in conjunction with the new system's dial plan to create Interchange network addresses, usually addresses that match external direct dialing of the new system's mailboxes.

To administer the remote machine dial plan, do the following:

1. Start at the Interchange main menu and select

> **Interchange Administration**
>
> > **Remote Machine Administration**
> >
> > > **Dial Plan Mapping**

The system displays the Dial Plan Mapping screen (Figure 31).

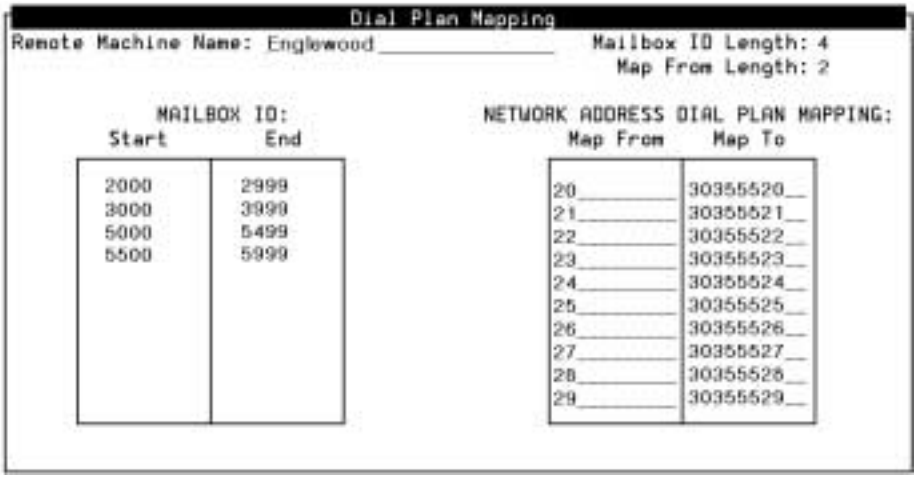


Figure 31. Dial Plan Mapping Screen

2. In the **Remote Machine Name** field, type the name of the new system, and press ENTER. If you do not remember the exact name, press F2 (Choices) to display a list of valid remote machines. In the example, you would type **Englewood**.

   After you press ENTER, the system displays information in the **Mailbox ID Length** and **MAILBOX ID Start** and **End** fields. You had entered this information previously in the Remote Machine Parameters screen.

3. In the **Map From Length** field, type the number of digits, within each mailbox ID, for which Interchange will substitute digits. Check the list of **MAILBOX ID**s. If you have a single range (for example, **30000** to **60000**) or multiple ranges that use the same prefix, enter **0** in the **Map From Length** field. In this case, you can leave the **Map From** column for the range blank.

If you have more than one range (usually to accommodate different area codes or DID prefixes), and the first digit of the **Start** and **End** fields for each range are unique, enter **1** in the **Map From Length** field. Also enter **1** if the last digit of the **Map From** prefix has to replace the first digit of the **MAILBOX IDS**.

If any ranges share first digits but have different prefixes, then you might need to enter **2** or higher in the **Map From Length** field.

CAUTION:
*Be careful about using **0** in the **Map From Length** field. If you change your dial plan later (for example, if you add more extensions that have a different DID prefix) and need to add Mailbox ID ranges for this system, you will have to remove the system from the Interchange network and add it again with the new dial plan. This task could entail a significant amount of work.*

*Therefore, if you anticipate the need to change the dial plan for this endpoint in the future, you might want to use a Map From Length of **1** or more. See Figure 9 on page 16, which illustrates the alternative to Map From Length **0** in anticipation of future changes.*

4. In the first **Map From** field, type the digit (or digits) that match the first digit (or digits) of the first **MAILBOX ID Start** and **End** range. This field must be blank if the **Map From Length** field is **0**. Otherwise, the number of digits you enter must match the number of digits specified in the **Map From Length** field.

   In the example, the first field contains **20**, because the mailbox ID range starts with 20, and these first two digits will be replaced with the last two digits of the **Map To** digit string.

5. In the first **Map To** field, type the area code and DID prefix of the mailbox IDs. Check your Planning Worksheet for these numbers. The last digits in this field must match the digits in the **Map From** field.

   In the example, the field contains **30355520**, with the last two digits, **20,** as substitutes for the first two digits **20** of the mailbox range, thereby creating mailbox IDs of 10 digits. For example, the first mailbox would have an Interchange network address of **303-555-2000**, and the last mailbox in this range would have an address of **303-555-2099**.

   NOTE:
   If the **Map From** field is blank, the **Map To** digits will simply be added to the mailbox IDs to total 10 digits.

6. Repeat Step 4 and Step 5 for each MAILBOX ID range.

NOTE:
There can be more than one DID prefix for the new system. Again, check your Planning Worksheet or consult with your switch administrator for the new system.

In the example (see Figure 11 on page 18 for a full illustration), the range **5500** to **5999** has the area code **720** and the local exchange prefix of **551**, which is different from the prefix for the range **5000** to **5499**.

7. Press F3 (Save).

CAUTION:
Use F7 (Options) only as described later in this document. Do not use F7 to delete or replace subscribers without first contacting your service support representatives, as the options can cause unexpected negative results.

Task 12 (Optional): Administer Directory Views

The Directory View screen allows you to define, for the new system, the other remote systems for which Interchange will provide updates to the new system. You can specify a range of mailbox IDs from which to accept update information.

NOTE:
If you selected **full** as the Subscriber Update Type on the Machine Profile screen (Figure 30 on page 44), you do not need to administer Directory Views. Interchange will automatically include *all* remote systems in the Interchange network in the new system's Directory Views. If you selected **directory views** as the Subscriber Update Type, you must administer Directory Views. If you selected **dynamic** as the Subscriber Update Type, you do not need to administer Directory Views.

To administer directory views, do the following:

1. Start at the Avaya Interchange main menu and select

```
> Interchange Administration
    > Remote Machine Administration
        > Directory Views
```

The system displays the Directory View screen (Figure 32).

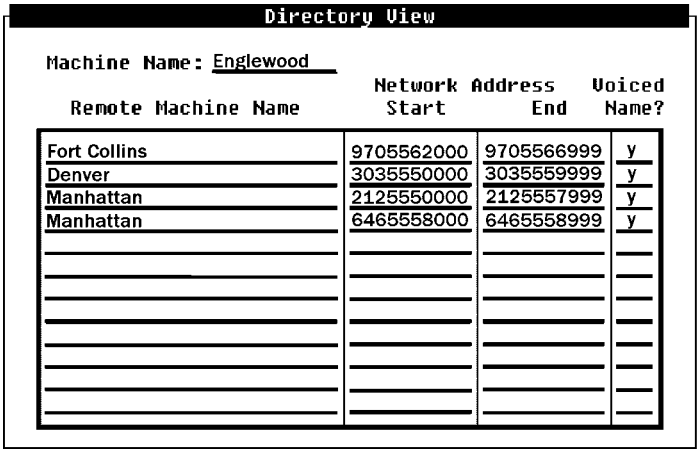


Figure 32. Directory View Screen

2. In the **Machine Name** field, type the name of the new system and then press ENTER**.**

   The system displays the current directory view information, if information exists, for this machine. If you selected **full** as the Subscriber Update Type for this system on the Machine Profile screen (Figure 30 on page 44), Interchange will display all remote systems in the Interchange network.

3. Press F3 (Continue).

4. In the **Remote Machine Name** column, type the name of another system in the Interchange network. Interchange updates the subscriber list for the new system with subscribers from this remote system.

   In the example, **Fort Collins**, **Denver**, and **Manhattan** are systems whose subscribers Interchange will dynamically include in, or remove from, the new system's remote subscriber directory.

5. In the **Network Address: Start** and **End** fields, type the first and last subscriber addresses to form a range of addresses on the remote system. These addresses must match addresses as defined in the Dial Plan Mapping screen for this remote system.

   In the example, the Manhattan system, as defined in its Dial Plan Mapping screen, has two mailbox ranges, one of **0000** to **7999**, with **Map To** entries of **2125550** through **2125557.** The other mailbox range for Manhattan is **8000** to **8999**, with a **Map To** entry of **6465558**. (This second range is the result of adding a different set of extensions in Manhattan, for which a different DID prefix had to be used.) As a result, the ranges of addresses for the Directory View are **2125552000** to **2125557999** and **6465558000** to **6465558999**.

6. In the **Voiced Name?** field, leave the default of **y** to have each subscriber's voiced name stored in the remote subscriber directory.
7. Press F3 (Save).
8. Press F4 (Reselect) to enter another remote machine and repeat this procedure, or press F6 (Cancel) to exit the screen and return to the Remote Machine Administration menu.

Adding All Machines

If you have many systems in the Interchange network, and you want to add most or almost all remote systems to the new system's directory view, you can add all machines and then delete those that you do not want to be included.

NOTE:
Adding all machines to Directory Views is the equivalent of defining a full subscriber update type for the new system.

To add all machines listed in a directory view, do the following:

1. From the Directory View screen, press F7 (Options).

   The system displays the Options menu (Figure 33).

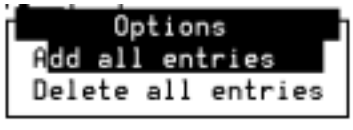


Figure 33. Options Menu

2. Select **Add all entries**.

   The system displays the Confirm window (Figure 34).

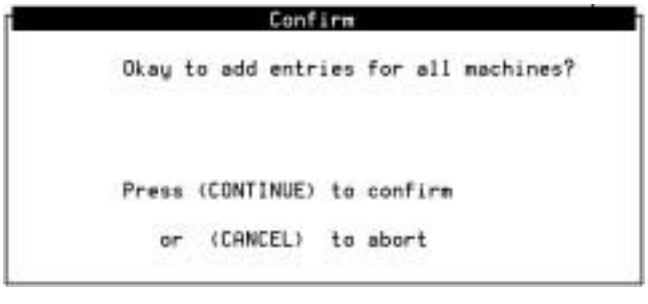


Figure 34. Confirm Window

3. Press F3 (Continue) to add all machines or F6 (Cancel) to return to the Directory View screen.

4. Press F6 (Cancel) until you return to the Avaya Interchange main menu.

Task 13: Verify That the Endpoint Has Been Administered

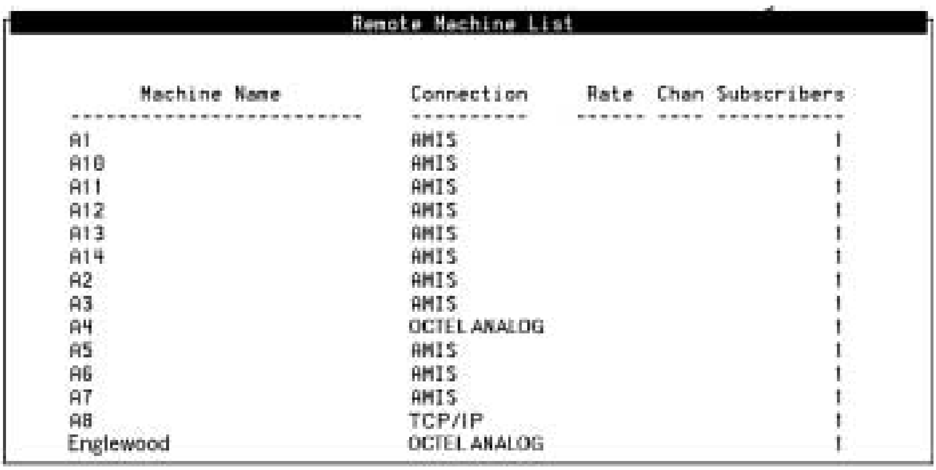
Use the Remote Machine List and Remote Machine Dial Plan List to verify that you have appropriately added the new messaging system.

To access the Remote Machine List, do the following:

1. Start at the Interchange Administration menu and select

```
> Interchange Administration
    > Remote Machine Administration
        > Remote Machine Lists
            > Remote Machine List
```

The system displays the Remote Machines List (Figure 35).



Remote Machine List

Machine Name	Connection	Rate	Chan	Subscribers
A1	AMIS			1
A10	AMIS			1
A11	AMIS			1
A12	AMIS			1
A13	AMIS			1
A14	AMIS			1
A2	AMIS			1
A3	AMIS			1
A4	OCTEL ANALOG			1
A5	AMIS			1
A6	AMIS			1
A7	AMIS			1
A8	TCP/IP			1
Englewood	OCTEL ANALOG			1

Figure 35. Remote Machine List

2. In the **Machine Name** column, look for the name of the new system. The name would be **Englewood** in the example.

3. Verify that the **Connection** column for your new system says **OCTEL ANALOG**.

4. Press F6 (Cancel) to return to the Remote Machine List menu.
5. From the Remote Machine List menu, select

```
> Remote Machine Dial Plan List
```

The system displays the Remote Machine Dial Plan List (Figure 36).

Remote Machine Dial Plan List

Machine Name	Type	Mailbox ID Start	Mailbox ID End	Extension Mapping From	Extension Mapping To
A1	AMIS	6148682778	6148682778		
A10	AMIS	6148682787	6148682787		
A11	AMIS	6148682788	6148682788		
A12	AMIS	6148682789	6148682789		
A13	AMIS	6148682790	6148682790		
Englewood	ARIA ANALOG	2000	2999	20	30355520
Englewood	ARIA ANALOG	3000	3999	21	30355521

Figure 36. Remote Machine Dial Plan List Screen

6. In the **Machine Name** column, locate the name of the new system.
7. Verify that the data in every column is correct.
8. Press F6 (Cancel) to exit the Remote Machine Dial Plan List.

Task 14: Add Remote Subscribers to Interchange

Add remote subscribers to Interchange so that Interchange can pass on messages to those subscribers.

The following options for adding subscribers are available:

- Bulk Subscriber Administration by FTP File (recommended)
- Universal Self-Registration Agent (recommended)
- Sending Messages Through Interchange
- Adding Subscribers Through the Subscriber Parameters Administration screen

- Bulk Subscriber Administration by Range

Use the Demand Remote Update option only if the number of subscribers on the new system is small (usually fewer than 40). Otherwise, with a large number of subscribers, using this option can take a long time.

Avaya does *not* recommend the use of bulk administration by range to add subscribers because this method reserves disk space for every extension or mailbox ID included in the range, even if no subscribers have been administered within the range. Use this option only as a last resort.

Adding Subscribers Through Self-Registration

Avaya recommends subscriber self-registration for Octel Analog Networking systems. For self-registration, you notify each subscriber to send his or her voiced name to Interchange, which registers the subscribers' mailboxes and captures the voice recordings of their names so that the names can be sent across the network with Aria messages.

For self-registration, do the following:

1. Enter the self-registration phone number in the **Self-Registration Agent ID** field on the General Parameters Screen (see page 24), as indicated in the task Task 5: Check the Interchange Serial Number, If Any (see page 24).
2. Use a broadcast message, recorded by the administrator of the new messaging system, to notify subscribers of self-registration.

   Instructions might tell each subscriber to:

   a. Log in to the messaging system.

   b. Record only his or her name in a message.

   c. Send the message to the self-registration phone number.

If subscribers fail to self-register, they will fail to receive messages from other messaging systems. However, if subscribers on the new system later send messages through the Interchange network, Interchange can identify them and register those subscribers for the new system. In this latter case, Interchange will not send the voiced names.

Adding Subscribers Through FTP

Avaya also recommends the use of FTP to upload the names of subscribers on the new system so that other subscribers within the network can address messages by using the names of the new subscribers.

To use FTP to load subscriber lists to Interchange, do the following:

1. Create an ASCII file with a text-only tool such as NotePad.

2. Give the file a name in the format **`name.add`** (in the example, the file name would be **Englewood.add**).
3. Using the following format, type subscriber names into the file:

   `machine_name``|`*`mailbox_ID`*`|`*`lastname,firstname`*`|`*`community_ID`*`||`

   `mailbox ID` is the actual mailbox ID as it appears on the new messaging system. **`community_ID`** can be blank or **1**, unless the new messaging system uses more than one community ID. The ‘‘pipe’’ symbol (|) is used to separate units of data and normally appears on your keyboard on the same key as the backslash (\).

   Our example might have an entry such as:

   Englew|22444|jones,bob|1||

   or leave the community ID field blank as in:

   Englew|22444|jones,bob|||

   CAUTION:
   Be sure there are no blank spaces after the comma, pipe symbols, or at the beginning or end of each entry. Also, the names are case sensitive.

4. Press ENTER or the equivalent of a carriage return on your keyboard.
5. Repeat step 3 for every subscriber currently administered on the new messaging system.
6. Save the file.
7. Upload the file to Interchange by using the following steps. You can use an FTP tool you are familiar with. However, be sure to transfer the file as an *ASCII* file, *not* as a binary file.

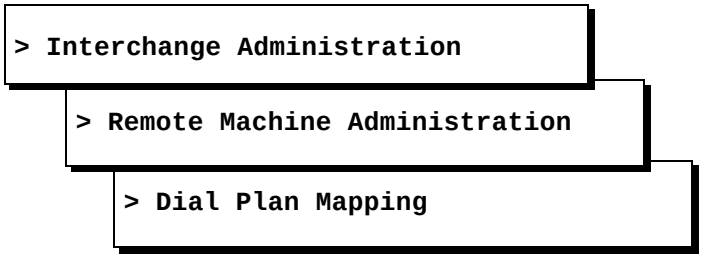
   a. In the tool, enter the IP address of the Interchange.

   b. Enter the user ID *icftp* and password for the Interchange *iclog/icftp* directory.

   c. Select the *amis_sub* subdirectory and move the FTP file, *as an ASCII file*, to the directory.

   When the file is uploaded, exit from your FTP tool and continue with Step 8.

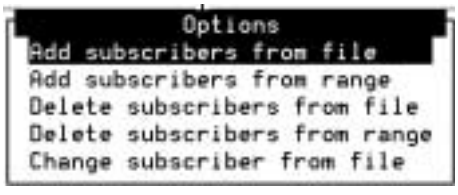
8. Start at the Interchange main menu and select



   The system displays the Dial Plan Mapping screen (Figure 31).

9. Press F7 (Options).

   The system displays the Options menu.



10. Select **`Add subscribers from file`** and press ENTER**.**

    The system displays the Confirm window (Figure 37).

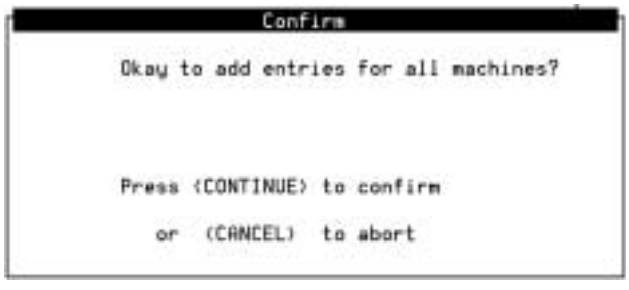


Figure 37. Confirm Window

11. Press F3 (Continue).

    The system will add all subscriber names. Additionally, Interchange changes the name of file *filename.add* to *filename.add.done* and adds a file called *filename.add.log.* In the example, the files would be called **Englewood.add.done** *and* **Englewood.add.log**.

12. Press F6 (Cancel) to return to the Interchange Administration menu.

13. Access the Interchange FTP directory with your FTP tool again.

14. Download to your computer from Interchange the file *filename.add.log.*

15. Open the *filename.add.log* file in an ASCII text editor such as NotePad to see if there were any problems with adding subscribers.

Adding Subscribers to Interchange with a Demand Remote Update

You can add remote subscribers to Interchange by using the Remote Update capability of Interchange instead of the FTP file upload. See Testing with a Demand Remote Pull (see page 58).

Task 15: Verify the Subscriber Update

1. From the Interchange Administration menu, select

> **Subscriber Administration**

> **Subscriber Lists**

The system displays the Subscriber Lists menu (Figure 38).

Figure 38. Subscriber Lists Menu

2. Select **By Remote Machine Name**.

   The system displays the Subscriber List By Remote Machine Name.

3. Check the number of subscribers to see if the number matches the number of subscribers administered on the Aria system. If you ran a demand remote update, also check to see that voiced names appear for subscribers.

4. Press F6 (Cancel) to return to the Interchange Administration menu.

Task 16: Test the Connection

There are two tests you can run:

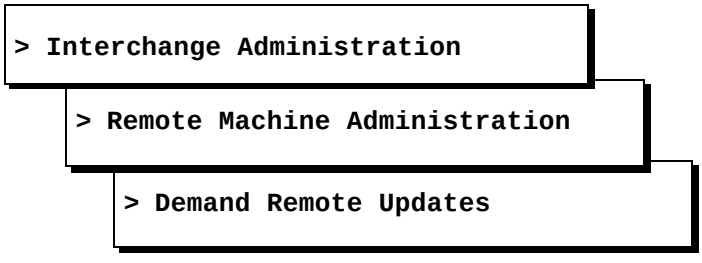
Testing with a Demand Remote Pull

To test the connection between Interchange and the Aria system, you can add remote subscribers to Interchange by using the Demand Remote Update capability of Interchange. This capability is also an alternative to updating Interchange through the FTP file upload if you choose to pull all subscribers to Interchange. However, see the following Caution.

CAUTION:
Since the demand pull uses an analog connection, this update can take a long time, approximately 14 to 21 seconds per subscriber.

To run a remote update, do the following:

1. Start at the Interchange main menu and select



The system displays the Demand Remote Update screen (Figure 39).

Figure 39. Demand Remote Update Screen

2. Type the name of the new system, and press ENTER.

The system displays the Range for Demand Remote Pull screen (Figure 41).

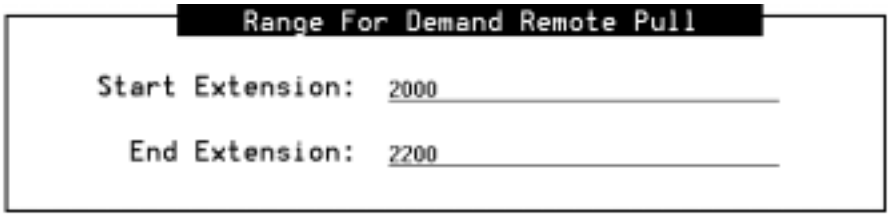


Figure 40. Range for Demand Remote Pull Screen

3. Enter the starting and ending extensions for a range of addresses for which the update will be executed. Since the update requires approximately 14 to 21 seconds per subscriber, select a small range for the test.
4. Press F3 (Continue).
5. The system displays the following Demand Remote Pull screen (Figure 41).

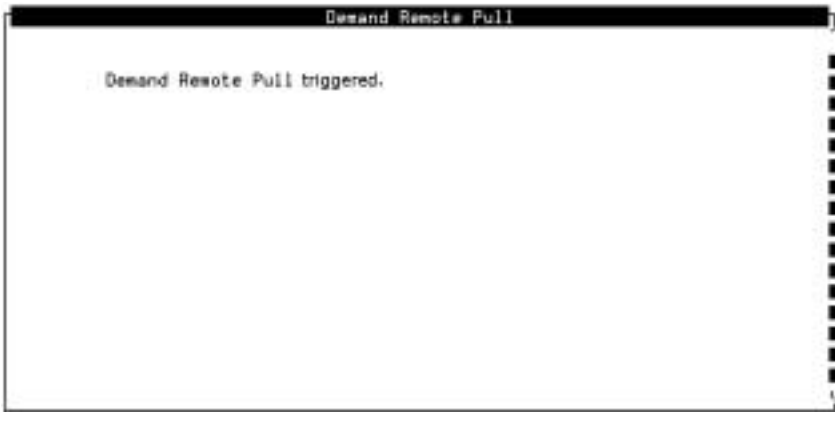


Figure 41. Demand Remote Pull Screen

The system will now update the Interchange with any ASCII or voiced names that have been added, deleted, or changed for the range of extensions you selected.

NOTE:
You can press F5 (Abort) to stop the demand remote update or F6 (Cancel) to return to the previous screen and re-enter an extension range.

6. Press F6 (Cancel) until you return to the Interchange Administration menu.
7. Verify that the demand remote pull of the new was successful (seeTask 15: Verify the Subscriber Update (see page 57)).

Sending Test Messages

To test the connection between Interchange and the new messaging system, do the following:

1. Log in to a test voice mailbox of the new messaging system. Either you or the system administrator of the new messaging system can do this. For the test mailbox, check the **End Node Test Mailboxes** identified in your Planning Worksheet (see page 6).
2. Self-register the voice mailbox with Interchange by completing steps a and b:

   NOTE:
   Self-registration is unnecessary if you performed a complete demand remote pull of the new system's subscribers. In this case, go to Step 3.

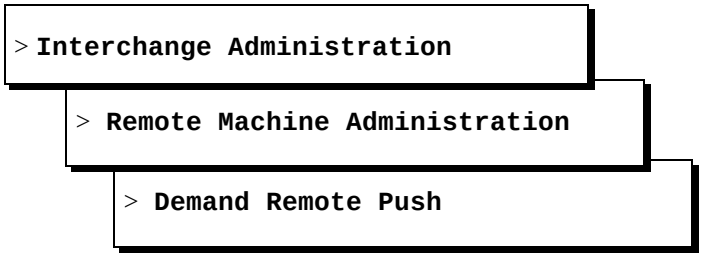
   a. Create a test message that contains only the name of the mailbox.
   b. Send the message to the Self-Registration address you created in Task 14: Add Remote Subscribers to Interchange (see page 53).
3. Log in to a voice mailbox on a *different* messaging system in the Interchange network.
4. Create a test message (for example, "This is a test message from Bob. Please message me back.").
5. Address and send the message to the test mailbox on the new messaging system. The address includes the whole Interchange network address, which includes the Map To digits, as defined in Task 11: Map the New System's Dial Plan for Interchange (see page 46), and the remaining digits of the specific mailbox.
6. In the test mailbox on the new system, listen to the test message sent in Step 5. Also, in the test mailbox, send a reply to the test message back to the mailbox on the other system.
7. Listen to the reply in the mailbox you logged in to in Step 3.

Task 17 (Optional): Manually Update the Aria System

NOTE:
The following procedure can require a great deal of time to complete, since the communication is over an analog connection. As a result, full and Directory View updates are generally not recommended for systems that use Octel Analog Networking.

If you wish to have all Interchange remote subscribers (if full updates are specified) or the subscribers you defined in Directory Views (if any) immediately available on the new system for addressing by name, perform a demand remote push on the Aria system by using the following steps:

1. Start at the Interchange main menu and select



The system displays the Demand Remote Push screen (Figure 42).

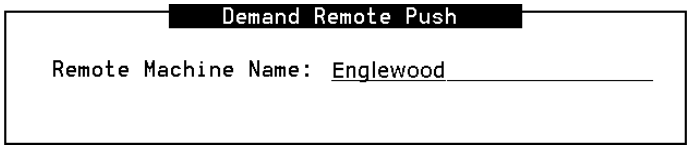


Figure 42. Demand Remote Push Screen

2. Type the system name, or press F2 (Choices) to display a list of valid remote machines.
3. Press F3 (Continue).

The system displays the following Demand Remote Push screen (Figure 43).

Figure 43. Demand Remote Push Screen

Interchange will now update the Aria system with any ASCII or voiced names on the Interchange network.

NOTE:
You can press F5 (Abort) to stop the demand remote push or F6 (Cancel) to return to the previous and re-enter an extension range.

4. Press F6 (Cancel) until you return to the Interchange Administration menu.

Task 18: Update Remote Systems for Subscribers on the New System

Once you have added the new system to the Interchange network, the other remote systems in the network need to recognize the subscribers on the new system for name addressing. The method you use to update a remote system for the new system's subscribers depends on what type of system the remote system is and how you have administered the Subscriber Update Type for that system (see Table 1).

NOTE:
If, over a short period of time, you are adding more than one system to your Interchange network, you might want to wait until all systems have been added before manually updating the existing systems in your network.

Table 1. Remote Node Update Options

Update Type	Remote System Type	Steps to Update a Remote System
Full	Intuity AUDIX TCP/IP, DCP, RS-232	If you have the **full** Subscriber Update Type turned on for an Intuity AUDIX remote system, perform for that remote system Manually Update an Intuity AUDIX System (see page 63) (do this during off hours for RS-232 systems).
	Aria, Serenade, and Octel 100	If you have the **full** Subscriber Update Type turned on for an Aria, Serenade, or Octel 100 remote system, perform for that remote system the same steps as in Task 17 (Optional): Manually Update the Aria System (see page 60). If the remote system uses Octel Analog Networking, complete this task during off hours.
	VPIM/AMIS	Full updates are not supported

Table 1. Remote Node Update Options

Dynamic	All systems	No action is required if the remote system already uses dynamic updates. Subscribers on the new system become known to subscribers on the existing remote system as subscribers from the new system send messages to subscribers on the remote system or vice versa. This method, of course, means that subscribers on the remote system cannot address a subscriber by name on the new system until a message has been sent to or from that subscriber.
Directory Views	Intuity AUDIX TCP/IP, DCP, RS-232	If you have directory views turned on for an Intuity AUDIX remote system, add the new system to the Directory Views screen for the Intuity AUDIX. Then, complete for that remote system Manually Update an Intuity AUDIX System (see page 63) (do this during off hours for RS-232 systems).
	Aria, Serenade, and Octel 100	If you have directory views turned on for an Aria, Serenade, or Octel 100 remote system, add the new system to the Directory Views screen for the remote system. Then, perform for that remote system the same steps as in Task 17 (Optional): Manually Update the Aria System (see page 60). These steps are identical for all Aria, Serenade, and Octel 100 systems. If the remote system uses Octel Analog Networking, complete this task during off hours.
	VPIM/AMIS	Directory Views are not supported.

Manually Update an Intuity AUDIX System

NOTE:
You perform this task on the Intuity AUDIX endpoint itself, not on Interchange. This task applies only to Intuity AUDIX systems that have full or directory views for their subscriber update types. For Aria, Serenade, and Octel 100 remote nodes that use full or directory view updates, see Task 17 (Optional): Manually Update the Aria System (see page 60) for instructions.

To update an Intuity AUDIX system in the network with subscribers in the system you just added, use the following steps:

1. Starting from the Intuity AUDIX main menu, select

```
>AUDIX Administration
```

The system displays a blank AUDIX screen.

2. Enter **list measurements feature day** at the **`enter command:`** prompt.

   The system displays the Feature Daily Traffic screen.

3. Write down the current number of remote users.

4. Press F6 (Cancel).

   The cursor returns to the command line.

5. Enter **get remote_updates *remote_machine_name*** at the **`enter command:`** prompt, where ***remote_machine_name*** is the name of Interchange.

   In the example, the name for Interchange is **central**.

   The system displays the Remote Update Request screen (Figure 2).

```
fort collins          Active          Alarms:  mwA                    Logins: 4
get remote_updates central                                          Page 1 of 1
                          REMOTE UPDATE REQUEST


Request Full Update from Machine:  central

           Status of Last Update:  completed

           Last Completed Update:  01/10/01 19:54

    Press [Enter]  for Full Update Request
          [Cancel] to Abort









enter command: get remote_updates central
```

Figure 2. Intuity AUDIX Remote Update Request Screen

6. Press ENTER to begin the remote update or press F6 (Cancel).

   The system begins the remote update.

   NOTE:
   The update might take some time, possibly hours, depending on the number of users on the remote system.

7. When the remote update is complete, enter **list remote extensions *remote_machine_name*** at the **`enter command:`** prompt, where ***remote_machine_name*** is the name for Interchange.

   The system displays the List Remote Extensions screen.

8. Check that the remote users of Interchange's new system are listed.
9. Enter **list measurements feature day** at the **`enter command:`** prompt.

   The system displays the Feature Daily Traffic screen.

10. Verify the new number of remote users.
11. Enter **display administration-log** at the **`enter command:`** prompt.

    The system displays the Administration Log screen.

12. Verify that no conflicts or problems occurred with the remote update.
13. Press F1 (Cancel).

    The cursor returns to the command line, and the system displays the message `Command Successfully Completed`.

14. Enter **exit** at the **`enter command:`** prompt to leave AUDIX Administration.